



THE ROAD NOT TAKEN

The way you do a thing often determines the success you are likely to find in doing it. That is why we took a different path in creating a fresh alliance of resources.

MAKING ALL THE DIFFERENCE

By gathering our resources, we are marshaling the means to accelerate the creation and distribution of pharmaceuticals for the benefit of patients and physicians, alike. By doing so, we are also helping to increase the expectations and opportunities of those who work on their behalf...our coworkers and associates.

As to the choice of paths, the poet has written:

*"I took the one less traveled by,
And that has made all the difference."*

Had we chosen a more conventional course for our future instead of the one we did, we may have compromised not only our future, but our friends as well.

*A better way
to make a difference*



The Du Pont Merck
Pharmaceutical Company

A partnership of Du Pont and Merck & Co., Inc.

HOLLAND

Circle No. 119 on Readers' Service Card

DISCOVER! 1991



Call Today for Travel in 1991!
(800) 252-4910

Travels with AAAS

For the Inquisitive Traveler

- **Costa Rica: Wildlife & Ecology**, April 6-17. Simply the finest place in the world to see rainforest!
- **Mexico's West Coast & Sea of Cortez** with *M/V Yorktown Clipper*, April 6-20. Whales, remote beaches, Acapulco, Puerto Vallarta and more!
- **Canyonlands**, May 30-June 7. The wonderlands of Zion, Bryce, and the Grand Canyon.
- **Alaska**, June 27-July 9. Glacier Bay, Nome & Bering Land Bridge, and 3 nights at Mt. McKinley.
- **Galapagos Islands & Ecuador** with *M/V Santa Cruz*, July 8-19, with **Peru Extension** to July 25. Galapagos tortoises, Incas, and Andes.
- **Bahamas** with *S/V Wind Star*, August 10-17. Coral reefs, pirate treasures, Bimini, Green Turtle Cay and Nassau.
- **Amazon & Brazil: Wildlife** September 11-26. From anteaters to woolly spider monkeys! Manaus, the Pantanal, Emas, Caratinga, and Rio.
- **Tahiti** with *S/V Wind Song*, September 28-October 5. Eight days in paradise! Papeete, Raiatea, Bora Bora and Moorea.
- **Australia**, October 7-18. Koalas, kangaroos, Great Barrier Reef, Sydney and Melbourne. **New Zealand Extension** to October 25. The wonders of Milford Sound and Mt. Cook.



For Members & Friends of AAAS by
BETCHART EXPEDITIONS INC. • 21601 Stevens Creek Blvd. • Cupertino, CA 95014 • (800) 252-4910

NEW

NEW

NEW

PROTEIN KINASE INHIBITORS

CALPHOSTIN C

Protein Kinase C Inhibitor

K-252a & K-252b

Protein Kinase
Inhibitors

KT5720

Protein Kinase A
Inhibitor

KT5926

Myosin Light
Chain Kinase
Inhibitor

KT5823

Protein Kinase G
Inhibitor

STAUROSPORINE

Protein Kinase Inhibitor

Enzyme	Inhibition constant, ki (μM)						IC_{50} value (μM)	
	Staurosporine	K-252a	K-252b	KT5720	KT5823	KT5926	Staurosporine	Calphostin C
Protein Kinase C	0.0007	0.025	0.020	> 2.000	4.000	0.723	0.0027	0.05
c-AMP-dependent Protein Kinase	0.0070	0.016	0.090	0.056	> 10.000	1.200	0.0082	> 50.00
c-GMP-dependent Protein Kinase	0.0085	0.015	0.100	> 2.000	0.234	0.158	0.0310	> 25.00
Myosin Light-Chain Kinase	0.0013	0.020	0.147	> 2.000	> 10.000	0.018	0.0019	> 5.00

KAMIYA BIOMEDICAL COMPANY
P.O. Box 6067, Thousand Oaks, CA 91359

Phone (818) 706-8564
FAX (818) 706-8763

Tropical Diseases Symposium Meharry Medical College April 16, 1991

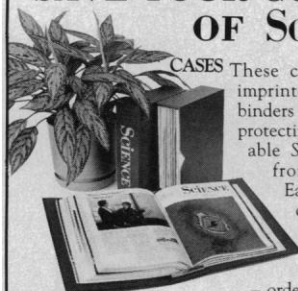
Meharry Medical College, School of Graduate Studies, is sponsoring the Eighth Annual Symposium entitled "Recent Advances in the Immunology and Biochemistry of Tropical Diseases" which will be held Tuesday, April 16, 1991 from 8:00 am to 5:00 pm at Meharry Medical College in Nashville, Tennessee. The registration is \$50.00 (students \$20.00).

The speakers include Ronald E. Blanton, M.D., Case Western Reserve, Schistosome protein synthesis; Ed Pearce, Ph.D., Cornell, T cell responses in schistosomiasis; Tom Unnasch, Ph.D., University of Alabama Birmingham, Recombinant antigens of *Onchocerca volvulus*; Paul T. Englund, Ph.D., Johns Hopkins, Trypanosome GPI protein anchors; David Campbell, Ph.D., UCLA, Gene structure/transcription in trypanosomes; Fernando Villalta, Ph.D., Meharry Medical College, Host cell invasion by *T. cruzi*; Mary E. Wilson, M.D., University of Iowa, gp63 expression in *Leishmania*.

For more information please contact:
George C. Hill, Ph.D.
Director and Professor
Division of Biomedical Sciences
Meharry Medical College
1005 D.B. Todd Jr., Blvd.
Nashville, TN 37208
(615) 327-6193

This symposium is part of an NIH Tropical Diseases Training Program with predoctoral and postdoctoral fellowships available.

SAVE YOUR COPIES OF SCIENCE



CASES These custom-made, imprinted cases and binders are ideal for protecting your valuable Science copies from damage.

Each binder or case holds one volume of Science, or 13 weekly issues

BINDER — order four binders or cases to hold a complete year of issues. Constructed from reinforced board and covered with durable, leather-like red material and stamped in gold, the cases are V-notched for easy access; binders have a special spring mechanism to hold individual rods which easily snap in.

Cases	1 - \$7.95	2 - \$14.95	4 - \$27.95
Binders	1 - \$9.95	2 - \$18.95	4 - \$35.95

SCIENCE

Jesse Jones Industries, Dept. SCE
499 East Erie Ave., Philadelphia, PA 19134

Enclosed is \$_____ for _____ Cases;
_____ Binders. Add \$1 per case/binder for postage & handling. Outside USA \$2.50 per case/binder (US funds only). PA residents add 6% sales tax.

Print Name _____

Address _____

No P.O. Box Numbers Please

City _____

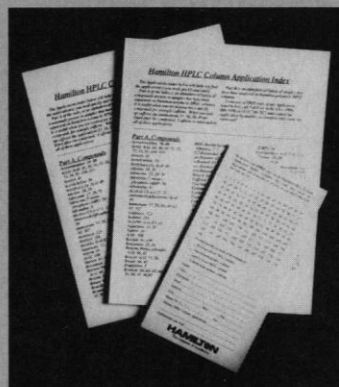
State/Zip _____

CHARGE ORDERS (Minimum \$15): Am Ex, Visa, MC, DC accepted. Send card name, #, Exp. date.

CALL TOLL FREE 7 days, 24 hours 1-800-825-6690

— SATISFACTION GUARANTEED —

NEW HAMILTON HPLC Column Application Index



The Hamilton HPLC Column Application Index makes locating applications quick and easy for these HPLC columns:

- *Reversed Phase*
- *Ion Chromatography*
- *Ion Exclusion*
- *Carbohydrate*

The two-part index makes it simple to locate your application. Part A is an alphabetical listing of compounds present in samples (for example Calcium). Part B is an alphabetical listing of samples analyzed on Hamilton polymeric HPLC columns (for example, Water, cations in Reno tap water).

For your **FREE** copy of the HPLC Application Index, call 800/648-5950, or circle the **READER SERVICE CARD**.

HAMILTON

The measure of excellence.

Hamilton Company
P.O. Box 10030
Reno, Nevada 89520-0012
800-648-5950 or 702-786-7077

Circle No. 98 on Readers' Service Card

ATTENTION DIALYZERS



WASTING...

VALUABLE TIME WAITING
FOR YOUR SAMPLES TO
EQUILIBRATE.

Six models of multiple sample dialysis systems (10, 18, and 36 place), mix both dialysate AND sample. Time for equilibration is considerably less than with static sample systems.

Other features that set us apart from the competition-

- Preassembled dialysis capsules are stored in trays provided, for instant dialysis on demand.
- Three dialysis capsule sizes (9, 22 and 42mm in diameter) for samples of 10ul to 50ml, give greater control of surface to volume ratios.
- Capsules are easily refitted with fresh dialysis membrane from off-the-shelf tubing cut into appropriate squares. Cost of each dialysis is only two cents.
- Precut dialysis membrane is available in six molecular weight cutoff ranges from 1000 to 50,000 MWCO.
- Well accepted by users - over 1,500 sales.
- Price of complete systems start at only \$175.00.
- Custom designs at nominal extra cost. Call us with your dialysis or equilibrium dialysis needs.

1-800-247-5345.

InstruMed Inc.

P.O. Box N
Union Bridge, MD 21791.

Circle No. 123 on Readers' Service Card

DNA by Operon.

It's about time.

We know that by the time you order a new DNA sequence, you already need it. That's why at Operon we ship most orders in 2 to 3 working days. And our stringent quality control ensures that you get exactly the synthetic DNA you order. Call for a free Researcher Kit. It's time you learned more about Operon.

(800) 688-2248

OPERON

OPERON TECHNOLOGIES, INC.

1000 Atlantic Ave., Suite 108 Alameda CA 94501
Tel (415) 865-8644 · Fax (415) 865-5255—NIHBP 263-00033233

WORLD'S LEADING SUPPLIER OF SYNTHETIC DNA.

Circle No. 33 on Readers' Service Card

THE EMF-CANCER QUESTION



A SCIENCE Reprint Booklet

Due to the popularity of *Science's* recent three-part series by Robert Pool examining the debate over the possible biological effects of electromagnetic fields, we put the articles together in one convenient and comprehensive reprint booklet. The first article looks at the epidemiological evidence for a link between electromagnetic fields and cancer. The second article deals with cell and animal studies, and the third examines policy questions and the politics behind the research.

To order copies of this booklet, complete the coupon below and send your check, payable to AAAS. All orders must be prepaid.

reprint booklets	price/piece
1-20	\$3.25
21-29	\$2.50
30 or more	\$2.00

Total # ordered _____

Subtotal _____

CA shipment, add tax _____

Total _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

MAIL TO: Corrine Harris • AAAS/Reprints 1333 H Street, NW • Wash., DC 20005

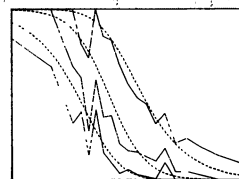
Assessing Higher Order Thinking in Mathematics

Edited by Gerald Kulm

Teaching higher order thinking is essential in today's world. And what is taught must be tested. Unfortunately, most mathematics tests focus primarily on rote computational skills and memorized facts rather than on higher order thinking. This book addresses such concerns. The authors explore new approaches to mathematics assessment, provide directions for reforming mathematics testing, and give examples of innovative test items. It is especially valuable for teachers, test publishers, researchers, and federal and state educational policy makers.

Topics include: A new world view of assessment in mathematics; power items and the alignment of curriculum and assessment; assessing student growth in mathematical problem-solving; computer-based mathematics assessment; calculators and mathematics assessment; students' theories about mathematics and their mathematical knowledge; assessing schema knowledge for arithmetic story problems; critical evaluation of quantitative arguments; investigation of structured problem-solving items; and new directions for mathematics assessment.

Assessing Higher Order Thinking in Mathematics



Edited by Gerald Kulm

1990; 216 pp.; indexed
#89-27S - softcover; \$24.95
(AAAS members \$19.95)

Published by the
**American Association for
the Advancement of Science**

To order: By mail, individuals must prepay with check or charge card. Send check to AAAS Books, Dept. A10, PO Box 753, Waldorf, MD 20604. By phone, (use VISA/Mastercard only) call 301-645-5643 (9am-4pm ET) and ask for AAAS. By fax, 301-843-0159. Add \$4.00 postage/handling per order. Please specify item #89-27S. For shipments to California, add applicable sales tax.

HPLC: Hydroxyapatite and Fluoroapatite Columns

These high-performance liquid chromatography (HPLC) columns are packed with newly developed spherical ceramic particles. They are suitable for separating proteins, enzymes, nucleic acids, and other substances in the ion-exchange mode. The fluoroapatite column can also be operated under acidic conditions. The hydroxyapatite columns are available in particle sizes of 2, 10, and 20 μm ; the fluoroapatite columns are available in the 2- μm particle size. Both come packed in stainless steel or glass hardware. Dy-Chrom. Circle 555.

Enhanced Structure Prediction Software

Enhancements to NMRgraf structure prediction software include new capabilities for predicting the structure of small molecules, polymers, and proteins; features for increasing the speed and accuracy of the prediction of structures from nuclear magnetic resonance data; and a new X-windows interface with pull-down menus, prompt and dialog boxes, and full support of the graphical user interface. Predicted structures can be graphically displayed on three-dimensional workstations, including Silicon Graphics IRIS, IBM RS6000, Evans & Sutherland ESV, Stradent TITAN, and Sun SparcStation. Molecular Simulations. Circle 566.

Citation Software Updated

A new version of the bibliographic management program Citation allows the user to record any number of authors per reference. A macro key helps reduce repetitive data entry tasks. A tagging feature allows references to be toggled on and off. Other features include pull-down menus, three key words per reference, and greater control over order and placement of author names. Rhislander Software. Circle 525.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Pooled Rodent Sera

Serotec now offers pooled normal mouse and rat serum, with a large number of strain-specific sera available. The sera can be used as starting material for obtaining various serum proteins or as blocking agents for prevention of cross-reactivity in immunological studies. Serotec. Circle 528.

Cell Culture System

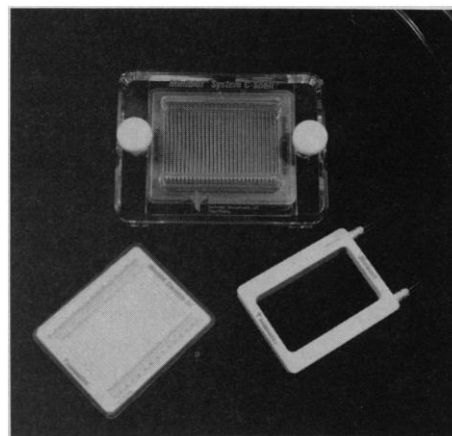
The ACUSYST-XCELL system integrates automation and control technology for large-scale production of mammalian cell culture. The total annual output of the system can exceed 4 kg of monoclonal antibody. Different cell lines can be cultured simultaneously on eight independent, pre-sterilized flow paths. Each flow path is monitored by pH, dissolved oxygen, and temperature probes that trigger six input-output delivery pumps. The system is controlled by an IBM Model 70 master computer. A second remote monitoring computer provides easy access to the system from outside the clean room. Data are collected and logged on a hard drive and can be sorted, graphed, and printed as desired. Endotronics. Circle 535.

Data Analysis and Graphing Software

Version 2.1 of KaleidaGraph for Macintosh personal computers is designed for analysis of large amounts of data. The program allows the user to analyze data with a programmable macro calculator and algebraic formula entry. The data can then be transformed into high-resolution, publication-quality graphics, by use of any of 16 plot types, with precise user control of plot elements. Added features of the new version include new plotting functions, a function that allows the user to assign a variable name to anything from a constant to a complicated algebraic expression, and new statistics and curve-fitting functions. Synergy Software. Circle 537.

Cassette System for Immunoblotting

The MINIBLOT System for protein immunoblotting features disposable cassettes for screening up to 28 separate antibody samples on a single blot. Disposable cassettes prevent carryover from one assay to another and ensure reproducible results. Operator contact with potentially hazardous



serum is minimized, as sera are completely contained within the cassette channels. The entire membrane is placed in the unit instead of being cut into strips, as in conventional procedures. Samples are loaded through entry ports into separate channels of the cassette. Only 50 μl of antibody is required per test, enabling the user to screen samples such as hybridoma supernatants or dried blood spots. Immunetics. Circle 526.

Literature

Bring out the Best in your HPLC is a six-page, color brochure that describes three detectors for high-performance liquid chromatography, including a diode array detector, an absorbance detector, and a programmable absorbance detector. Applied Biosystems. Circle 569.

SuperScript cDNA Synthesis and Cloning Systems is a brochure that describes two systems designed to generate superior quality complementary DNA libraries from a starting messenger RNA population. Life Technologies. Circle 570.

Ultrafree Filter Units for concentration and desalting steps before or after column chromatography, electrophoresis, and other analytical techniques are the subject of a new brochure. The devices can be used to remove cells, viruses, and particulates as well as for the purification and recovery of proteins, enzymes, amino acids, DNA, or drugs. Millipore. Circle 571.

METHODS: A Companion to Methods in Enzymology is a topic-oriented journal that emphasizes clear descriptions of protocols that allow applications of these methods in any modern laboratory. Academic Press. Circle 572.

The ninth issue of *Molecular Biology Reports* features a description of a rapid, simple technique for efficient DNA sequencing that uses new Bst DNA polymerase. Bio-Rad Laboratories. Circle 574.

Personnel Placement

LINE CLASSIFIED ADVERTISEMENTS

DEADLINES: Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* publishes each Friday, except the last Friday of the year. Advertisements must be submitted in writing.

HOW TO SUBMIT A CLASSIFIED AD: Prepare double-spaced typewritten ad copy on a separate sheet. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Also include a cover sheet which gives name and phone number of contact person, desired date of publication, and billing information, including any special invoicing requests. Mail or FAX materials to:

SCIENCE Classified Advertising
1333 H Street, N.W., Room 940
Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816

CLASSIFICATIONS: *Science* publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired.

HOW TO CALCULATE RATE FOR CLASSIFIED AD: Ads are \$41 per line with a \$410 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces.

To ESTIMATE ad cost, count total number of 52 character lines and multiply by \$41 to find approximate cost of ad per week. Each line of centered heading counts as one line. Also count one line for white space between headline and first line of text; all partial lines are also counted as full lines (including all centered reply information).

Remember, this is a rough estimate only. Allow for variation between estimated typewritten lines and ads when actually typeset for magazine. Therefore, purchase orders must allow additional funds for flexibility and/or adjustment. *Science* cannot provide proofs of typeset ads.

PREPAYMENT DISCOUNT: A 3% cash discount is granted to all prepaid line ads. Prepayment made in U.S. dollars by checks drawn on U.S. banks is required on all foreign ads.

CREDIT CARDS: *Science* accepts MasterCard and VISA. Both personal and corporate cards may be used. Prepayment does not apply to credit cards.

BOXES AND LOGOS: Any line classified ad can be boxed and/or published with logo to increase its visibility on page. Since the box takes up additional space, one line now equals 48 characters and spaces; two additional lines will be added to allow for top and bottom rules. Logos are billed according to the number of lines needed to fit logo in space.

CANCELLATIONS: Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and information about fractional display ads (all ads 1/6 page and larger) and all Marketplace listings of available products and services, contact:

Scherago Associates
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050
FAX: 212-382-3725

CONDITIONS: Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it and to decline classifications which it considers misleading.

POSITIONS OPEN

ASSISTANT PROFESSOR IN LABORATORY VIROLOGY

The Virology Division of the Department of Laboratory Medicine in the University of Washington School of Medicine is recruiting a Board-certified clinical pathologist as an assistant professor. Candidates should be prepared to develop new diagnostic procedures using in situ hybridization and DNA techniques to detect fastidious viruses such as HSV-2. The candidate should expect to establish an independently funded research program. Requirements include a strong research training background and expertise and interest in research. In addition, responsibilities will include direction of a clinical service laboratory and teaching residents, postdoctoral fellows, and medical, graduate, and undergraduate students. Please submit curriculum vitae to: **Dr. Lawrence Corey, Professor and Head, Virology Division, D-536 Childrens Hospital and Medical Center, ZC-10, Seattle, WA 98105.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

BIOPSYCHOLOGY. University of Georgia, **ASSISTANT PROFESSOR.** Start September 1991. Applicants must be committed to excellence in teaching at undergraduate and graduate levels and show exceptional research potential in an area that is competitive for external funding. Send statement of interest, curriculum vitae, four letters of reference, and reprints to: **Biopsychology Search, Roger K. Thomas, Head, Psychology Department, University of Georgia, Athens, GA 30602.** Applications must be received by 30 March 1991. *The University of Georgia is an Affirmative Action and Equal Opportunity Employer.*

BIOLOGY. Marine biologist, **ASSISTANT PROFESSOR.** Begin fall semester 1991. Require Ph.D. with interest in field studies. Teach principles of biology course for nonmajors plus upper division classes: marine biology, oceanography, invertebrate zoology, and marine biology research methods, and participation in senior research program. Knowledge of computer applications in biology teaching and research would be helpful. Applications should be received by 27 March 1991 for full consideration. Send letter stating philosophy along with curriculum vitae and arrange to have three letters of reference sent to: **Dr. Michael Kolitsky, Chair, Department of Biological Sciences, California Lutheran University, 60 West Olsen Road, Thousand Oaks, CA 91360.** *An Equal Opportunity Employer.*

Applications are invited for a 3-year nontenure-track appointment as an **ASSISTANT PROFESSOR** in the Department of Microbiology effective 1 July 1991. Duties involve teaching introductory biochemistry and sections of introductory microbiology. There will be an opportunity for research. Applicants should have a Ph.D. and be effective at teaching large introductory lecture courses. *In accordance with Canadian immigration requirements, this notice is directed to Canadian citizens and permanent residents. UBC encourages qualified women and minority applicants.* Applicants should send their curriculum vitae and the names of three referees to: **Dr. G. B. Spiegelman, Acting Head, Department of Microbiology, The University of British Columbia, #300, 6174 University Boulevard, Vancouver, British Columbia, Canada V6T 1W5.** Applications should be received by 15 May 1991. The availability of this position is subject to final budgetary approval.

ASSISTANT PROFESSOR POSITION CELLULAR NEUROBIOLOGY DEPARTMENT OF PSYCHOBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Applications are invited for a tenure-track position at the level of assistant professor in cellular neurobiology. Preference will be given to applicants who have demonstrated expertise in research areas of interest to the department. The Department of Psychobiology emphasizes interdisciplinary approaches to the study of neural plasticity and behavior. The current major research themes of the department are development, reorganization following injury and disease, and learning and memory. Please submit, by 15 April 1991, curriculum vitae, description of research interests, and three confidential letters of recommendation to: **Herbert P. Killackey, Chair, Department of Psychobiology, University of California (UCI), Irvine, CA 92717.**

UCI is an Affirmative Action/Equal Opportunity Employer. The department encourages female and minority applicants.

POSITIONS OPEN

ASSISTANT PROFESSOR, PHYSIOLOGY

Tenure track, starting September 1991. Ph.D. required. Primary teaching in physiology and anatomy; must address qualifications for teaching general education human physiology. Additional teaching in discipline. Other research areas: molecular genetics, biotechnology (eukaryotes), histology, cytology; involvement in undergraduate research. *Women and minorities are encouraged to apply.* Send letter, teaching philosophy statement, curriculum vitae, up to three publications, and have three reference letters sent to: **Dr. Samuel I. Zeveloff, Chair, Department of Zoology, c/o Human Resource Department, Weber State University, Ogden, UT 84408-1016.** Telephone: 801-626-6165. Applications deadline: 29 March 1991. *WSU is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR (Ph.D. OR EQUIVALENT REQUIRED) CELL BIOLOGY

The Department of Biology at Western Washington University invites applications for a full-time, tenure-track faculty position in the area of cellular biology. The successful applicant will be expected to participate in the departmental teaching program and to pursue an active research program involving undergraduate and graduate (M.S.) students. This institution, located on Puget Sound near the foothills of the Cascade Mountains, is committed to excellence in both teaching and research. Applicants should submit curriculum vitae, a statement of teaching and research interests, and three letters of reference to:

D. C. Williams, Ph.D.
Chairman, Search Committee
Department of Biology
Western Washington University
Bellingham, WA 98225

Western Washington University is an Equal Opportunity/Affirmative Action Employer.

Application deadline: 1 April 1991.

ASSISTANT RESEARCH PROFESSOR ELECTROPHARMACOLOGY

The Department of Pharmacology at the University of Kentucky College of Medicine is seeking candidates for the positions of assistant research professor. Candidates should have a Ph.D. degree and extensive postdoctoral experience in the study of neuropharmacological mechanisms, using patch clamp approaches. Experience with tissue culture methods is also advantageous. The successful candidate would participate in both independent and collaborative projects, and would contribute to research training programs. Applicants should send their curriculum vitae and three letters of reference before 15 March 1991 to:

Dr. Philip Landfield
Professor and Chair
Department of Pharmacology
University of Kentucky
MS-309 Medical Center
Lexington, KY 40536-0084

ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR VIROLOGY

The Department of Medical Microbiology and Immunology, University of California, School of Medicine, Davis, has a tenure-track faculty position available for a molecular virologist beginning the fall of 1991. Applications are invited from qualified candidates who have either a Ph.D. or M.D. with an active research program in modern areas of molecular virology (such as regulation of gene splicing, gene transfer with virus vectors, immunoregulation of host resistance to viral infection, molecular genetics of viral pathogenesis). In addition to an outstanding research record, the applicant is expected to be dedicated to excellence in teaching medical students and graduate students. Closing date for applications is 1 May 1991.

Please send curriculum vitae, names of three references, and a brief summary of research interests and teaching accomplishments to: **Dr. Blaine L. Beaman, Chairman, Department of Medical Microbiology and Immunology, School of Medicine, University of California, Davis, CA 95616.** *The University of California is an Affirmative Action/Equal Opportunity Employer and we strongly encourage applications from persons who belong to minority or underrepresented groups.*

POSITIONS OPEN

BIOTECHNOLOGY PROGRAM

ASSISTANT TO FULL PROFESSOR. Rank dependent upon qualifications, position available in molecular immunology and/or molecular genetics to join a rapidly expanding, dynamic biotechnology program. Position provides a very generous support package for postdoctoral fellows, technologists, equipment, and supplies. Extensive extramurally funded research prevails at a level of \$3 million per year. Individuals are expected to have established an extramurally funded research program. Send curriculum vitae to: **Samuel M. Cohen, M.D., Ph.D., Department of Pathology/Microbiology, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-3135. Telephone: 402-559-6388. An Equal Opportunity/Affirmative Action Employer.**

THE UNIVERSITY OF THE WEST INDIES ST. AUGUSTINE, TRINIDAD

Applications are invited for the following post in the Department of Chemistry, Faculty of Natural Sciences: **SENIOR LECTURER/LECTURER IN PHYSICAL CHEMISTRY** with expertise in spectroscopy.

Annual salary range: Senior lecturer, TT\$69,180 to \$90,168; lecturer, TT\$54,708 to \$77,604. Passages, pension, housing allowances, study and travel, and book grants.

Send applications detailing qualifications and experience and naming three referees as soon as possible to: **Campus Registrar, The University of the West Indies, St. Augustine, Trinidad, W.I.** Further particulars sent to all applicants.

MOLECULAR AND CELLULAR PHYSIOLOGY THE UNIVERSITY OF IOWA

Applications are invited for faculty positions at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level from individuals with a record of high quality research in molecular biology, cell biology, developmental biology, or electrophysiology complementing existing departmental programs in eukaryotic gene expression, intracellular and intercellular signaling, or structure and function of membrane proteins. Modern laboratory space and substantial start-up support are available. Rank and salary are commensurate with training and experience. Minimum requirements are Ph.D. or M.D. degree and 2 years of relevant postdoctoral training. Screening will begin 1 April 1991. Send curriculum vitae, description of research, reprints, and three letters of recommendation to:

**Dr. Jeffrey Pessin, Chairman
Molecular and Cellular Physiology
Search Committee
Department of Physiology and Biophysics
The University of Iowa College of Medicine
Iowa City, IA 52242**

The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

The University of Utah School of Medicine is seeking new faculty to participate in a major augmentation of research in molecular biology of cancer. A search committee is in place with representation from the Utah Regional Cancer Center; the Howard Hughes Medical Institute; the Human Molecular Biology and Genetics Program; the Department of Cellular, Viral, and Molecular Biology; the Department of Human Genetics; the Department of Medicine, Division of Hematology/Oncology; and the Department of Radiology, Division of Radiation Oncology. We are seeking at least one established investigator (**ASSISTANT, ASSOCIATE, OR FULL PROFESSOR**) and up to three more junior level investigators (**INSTRUCTOR OR ASSISTANT PROFESSOR**). Potential for faculty appointment includes a tenure-track position in the Department of Radiology, Division of Radiation Oncology, as chief of its Section of Experimental Oncology with the possibility of joint appointment in another department as appropriate to the research and teaching background and interests of the candidate. Interested applicants send inquiries and curriculum vitae with three potential references to: **J. Robert Stewart, M.D., Professor and Director, Division of Radiation Oncology, Department of Radiology, Director, Utah Regional Cancer Center, University of Utah Health Sciences Center, Salt Lake City, UT 84132.** The recruitment will remain open until 1 May 1991 or until suitable candidates are identified. *The University of Utah is an Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR

New position, begin now or late August 1991. Experienced faculty member, Ph.D. in biology with research experience, expected to do some teaching of biology majors; histology/embryology. Primarily be a mentor and role model for funded undergraduate science minority students on training grants; serve as their research coordinator to professionally develop them for graduate school. Experience in small college setting desirable. Send letter stating interests, complete résumé, transcripts, and three letters of reference by 15 March 1991 to: **Sister John Karen Frei, Associate Vice President, Biological and Biomedical Sciences, Barry University, Miami, FL 33161.**

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY. Ph.D. in biochemistry or molecular biology required. Primarily teaching protein, enzyme, nucleotide, and nucleic acid biochemistry to freshmen medical students. Assist in weekly laboratories. Emphasis on teaching excellence. Research encouraged. Rank and salary commensurate with qualifications. All qualified candidates are encouraged to apply. Start July. Send by 25 March 1991 curriculum vitae and letter plus names, addresses, and telephone numbers of three professional references to: **Dr. Douglas Rushing, Head, Department of Biochemistry, University of Health Sciences, College of Osteopathic Medicine, 2105 Independence Boulevard, Kansas City, MO 64124. Telephone: 816-283-2205.**

BIOLOGY. MacMurray College, a private United Methodist liberal arts college, is seeking an **ASSISTANT OR ASSOCIATE PROFESSOR** in biology. Probably department chair. Tenure track. Effective date: 15 August 1991. Ph.D. required. Expertise in the following areas required: vertebrate zoology and human anatomy and physiology. Other areas of expertise desired: general biology, botany, animal behavior, parasitology, and field biology. Salary commensurate with degree and experience. Please send letter of application, curriculum vitae, teaching philosophy, graduate transcripts, and three letters of reference by 15 March 1991 to: **Dr. Jim Goulding, Vice President for Academic Affairs, MacMurray College, 447 East College, Jacksonville, IL 62650. Affirmative Action/Equal Opportunity Employer.**

EXECUTIVE DIRECTOR. The Barbara Davis Center for Childhood Diabetes at the University of Colorado Health Sciences Center is seeking applicants for the position of executive director. This person will report to the dean of the School of Medicine and will be responsible for development of both clinical and research programs. Primary academic appointment will be in the Department of Pediatrics. Applicants should have extensive experience with clinical and research aspects of childhood-onset diabetes. Administrative experience is also required. Send curriculum vitae to: **M. Douglas Jones, Jr., M.D., Professor and Chairman, Department of Pediatrics (B065), The Children's Hospital, 1056 East 19th Avenue, Denver, CO 80218 before 15 April 1991. The University of Colorado Health Sciences Center is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

NATIONAL INSTITUTE ON AGING, NIH RESEARCH PROGRAM DIRECTOR

The Biology of Aging Program of the National Institute on Aging (NIA) seeks a molecular endocrinologist to administer its Endocrinology Program. Activities include planning and implementing research initiatives through workshops and program announcements, communicating research results to Congress and the public, and administrative oversight of proposals and grants. A background in endocrinology and molecular biology is essential; familiarity with aging and NIH is desirable. Individuals may be hired through the Civil Service or Public Health Service Commissioned Corps, at salaries commensurate with qualifications and experience. Physicians may be eligible for bonus of up to \$20,000. To apply, send Application for Federal Employment (SF-171) and curriculum vitae to: **Ms. Susan Howard, Building 31, Room 2C11, 9000 Rockville Pike, Bethesda, MD 20892.** Applications must be postmarked by 29 March 1991. Call Ms. Howard at 301-496-5347 about application procedures, salaries, and benefits. Call **Dr. Huber Warner** at 301-496-6402 about scientific and administrative aspects of this position. *U.S. citizenship required. NIH is an Equal Opportunity Employer.*

POSITIONS OPEN

The University of Zurich, Switzerland, Institute of Biochemistry, invites applications for the tenured position of a

PROFESSOR OF BIOCHEMISTRY

Applicants should have an outstanding research record in the structural investigation of macromolecules; in particular, in processes of molecular recognition. The position requires a genuine interest in the training of medical and science students. The candidate should be able to teach in German within 2 years.

Applicants should include curriculum vitae, a list of publications, summary of current and planned research activities, relevant reprints, and a statement of teaching experience to be submitted to: **Professor H. Möhler, Biochemistry Search Committee, Institute of Pharmacology, University of Zurich, Gloriastrasse 32, 8006 Zurich, Switzerland, not later than 31 March 1991.**

ASSOCIATE/FULL PROFESSOR DEPARTMENT OF CELL BIOLOGY AND ANATOMY UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

Applications for tenure-track faculty positions are being sought from individuals with an interest and record in cell and molecular biology. Those working in the area of cell surfaces and cell interactions in neurobiology or cancer biology are particularly encouraged to apply. Ample space, start-up funds, and a competitive salary will be provided. Applicants should send curriculum vitae, brief summary of research interests, and names of three persons willing to serve as references to: **Dr. Kermit Carraway, Chairman, Department of Cell Biology and Anatomy, University of Miami School of Medicine, P.O. Box 016960 (R-124), Miami, FL 33101. An Equal Opportunity/Affirmative Action Employer.**

CHAIRMAN BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Texas Tech University Health Sciences Center School of Medicine invites applications for the position of chairman of the Department of Biochemistry and Molecular Biology. Applicants should have a distinguished record in research; a commitment to training graduate students, medical students, and postdoctoral fellows; and a desire to exercise strong and innovative leadership in building the department to a level of national prominence. Preference will be given to candidates who have a record of consistent research productivity and support through extramural sources, and have served on grant review boards at the national level. Interested applicants should send their curriculum vitae, synopsis of current and planned research, the names and addresses of three referees, and a brief statement indicating their interest in the position to: **Dr. Harry Weitlauf, Chairman, Search Committee, Texas Tech University Health Sciences Center, Department of Cell Biology and Anatomy, Lubbock, TX 79430.** The search committee will begin folder review in June and will continue the search process until a chairperson is selected. *Texas Tech University Health Sciences Center is an Equal Opportunity/Affirmative Action Institution.*

CASE WESTERN RESERVE UNIVERSITY CHAIRPERSON DEPARTMENT OF EPIDEMIOLOGY AND BIOSTATISTICS

Case Western Reserve University School of Medicine invites applications and nominations for the position of chairperson in the Department of Epidemiology and Biostatistics. The school considers this search as central to its major thrust in developing a broad, interdisciplinary program in the health of the public. Candidates should have a distinguished background in either public health, health services research, epidemiology, or biostatistics. The school is particularly interested in maintaining a broad perspective in the future development of the department. Letters of application, curriculum vitae, and the names, addresses, and telephone numbers of three references should be submitted to: **Adel A. F. Mahmoud, M.D., Chairman, Epidemiology and Biostatistics Search Committee, Department of Medicine, University Hospitals of Cleveland, 2074 Abington Road, Cleveland, OH 44106. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

DEAN, UNIVERSITY OF MARYLAND DENTAL SCHOOL

Applications and nominations are invited for the position of dean, University of Maryland Dental School. The Dental School is a part of the University of Maryland at Baltimore (UMAB) campus, which also includes the Schools of Medicine, Nursing, Pharmacy, Law, and Social Work as well as the Graduate School. The dean is responsible directly to the president of the UMAB campus. The successful candidate will be a nationally recognized scholar, eligible for appointment as full professor, and a leader in dental education who holds a dental degree and has the training and expertise necessary for the administration of all educational, clinical, research, and community health programs of the Dental School. For best consideration, applications and nominations should be received within 30 days of publication. A letter of intent, along with curriculum vitae, should be sent to: **Dr. Charles Leonard, Chairman, Dean's Search Committee, Department of Biochemistry, Dental School, 666 West Baltimore Street, Baltimore, MD 21201-1586. Telephone: 301-328-7917. The Dental School is an Affirmative Action/Equal Opportunity Employer, M/F/H/V.**

DIRECTOR, HISTOCOMPATIBILITY TESTING LABORATORY

The Cleveland Clinic Foundation is seeking an experienced individual to direct its Histocompatibility Testing Laboratory. The laboratory supports multiple renal and non-renal transplant programs in northeastern Ohio and West Virginia. Applicants must qualify as director/technical supervisor according to the *Standards of the American Society for Histocompatibility and Immunogenetics*. Preference will be given to individuals who enjoy collaborative activities in clinical, transplantation research. Please send curriculum vitae to: **Gerald A. Hoeltge, M.D., Chairman, Department of Blood Banking and Transfusion Medicine, The Cleveland Clinic Foundation, One Clinic Center, 9500 Euclid Avenue, Cleveland, OH 44195-5133.**

The Department of Pathology at the University of Texas Medical Branch (UTMB) at Galveston invites applications for a rewarding, tenure-track faculty position as **DIRECTOR, Clinical Microbiology Laboratories**. UTMB employs 8400 people and consists of four schools, seven hospitals, and two research institutes. Applicants should have a Ph.D. or M.D. degree and be Board-certified in clinical microbiology. The department is seeking an individual with a strong record of scientific achievement and leadership in clinical microbiology. Preference will be given to applicants who are using modern approaches in the study of pathogenic microorganisms. Duties will include developing and leading the clinical microbiology laboratory, as well as the American Board of Medical Microbiology approved postdoctoral program. Other responsibilities will include the teaching of both medical and graduate students. A strong, independent research program and interactions with other faculty investigating the pathobiology and immunobiology of infectious diseases is anticipated. Interested applicants should send detailed curriculum vitae, an outline of current clinical and research interests, and three letters of reference to: **David H. Walker, M.D., Chairman, Department of Pathology, The University of Texas Medical Branch, Galveston, TX 77550. UTMB is an Equal Opportunity/M/F/V/H/Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.**

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), is seeking an **ELECTRONICS ENGINEER** at the Richard B. Russell Agricultural Research Center, Athens, Georgia. The research involves a broad range of microwave measurements for quality sensing in agricultural products. The scope includes dielectric spectroscopy and moisture content measurement and monitoring in grain and other products. A wide range of microwave techniques and devices must be explored, and new techniques and methods of measurement must be developed. Experience in agricultural product moisture measurement by microwave techniques is required. Salary is commensurate with experience (\$52,406 to \$68,129). *U.S. citizenship is required.* For information on the research program or position, contact: **Dr. Stuart Nelson, 404-546-3101.** For information on application procedures and forms, contact: **Susan Jones, 404-546-3426. USDA/ARS is an Equal Opportunity Employer.**

POSITIONS OPEN

MANAGER, TOXICOLOGY AND METABOLISM

Not-for-profit R&D institute seeks Ph.D./D.A.B.T. to design and execute contracted pharmacology/toxicology, drug/chemical, and metabolism studies. Responsibilities include project management, data interpretation, and business development. Opportunity to build the department in a new state-of-the-art facility. Contact our executive search consultant: **Linda Smith, EFL Associates, 7101 College Boulevard, #550, Overland Park, KS 66210-1891. Telephone: 913-451-8866.**

DEPARTMENT OF VETERANS AFFAIRS VETERANS HEALTH SERVICES AND RESEARCH ADMINISTRATION HEALTH SCIENCE SPECIALIST

VA's Office of Research and Development, Medical Research Service, is seeking applicants for the position of health science specialist under the Intergovernmental Personnel Act (IPA). Under the IPA, the health science specialist would remain a faculty member at his/her current university and VA would reimburse the University for salary and benefits. The assignment will be for 2 years, with the possibility of extension. Responsibilities include participation in the development of policy and procedural directives, analysis of research proposals, recruitment of expert reviewers for research proposals and scientific review boards, supervision and/or preparation of research summary statements, arrangement and participation in site visits of research programs, and analysis and preparation of program and budgetary data related to scientific reviews, results, and trends. Applicants should have a Ph.D. or equivalent and some research and administrative experience.

Qualified applicants are invited to send curriculum vitae, bibliographies, and the names, addresses, and telephone numbers of three references by 30 March 1991 to: **Richard J. Greene, M.D., Assistant Chief Medical Director for Research and Development (142), Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, DC 20420.** Further information may be obtained from the same address or by calling: **Dr. Leroy Frey, Chief Program Review Division, 202-233-5065, or the Recruitment and Examining Division, VA Central Office, 1-800-368-5629. Equal Opportunity Employer.**

NEUROSCIENTISTS, CELL AND MOLECULAR BIOLOGISTS. Tenure-track **FACULTY POSITIONS** open in gross and microscopic anatomy. Research interests in neurosciences, cell and molecular biology. Rank and salary commensurate with experience. Research start-up funds available. Send curriculum vitae, statement of research interests, and the names and addresses of three references to: **Dr. James C. Story, Chairman, Department of Anatomy and Cell Biology, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, TN 37208** by 1 May 1991. *An Equal Opportunity/Affirmative Action Employer.*

Applications are invited for two rewarding tenure-track **FACULTY POSITIONS** in the Department of Pathology of the University of Texas Medical Branch (UTMB) at Galveston. UTMB employs 8400 people and consists of four schools, seven hospitals, and two research institutes. Applicants should have a Ph.D. or M.D. degree and a minimum of 2 years of postdoctoral research experience. The department is seeking individuals with a strong record of scientific achievement. Applicants are sought who apply modern scientific approaches to studies in two areas: (i) bacterial or viral pathogenesis and (ii) cellular immunology. Expertise in the areas of molecular biology and/or biochemistry is essential. Duties will include developing and maintaining a strong independent research program, and applicants will be expected to actively seek extramural funding. Other duties will include the teaching of both medical and graduate students. The Department of Pathology includes both clinical and basic scientists whose interests represent a diverse mixture of research areas including the pathobiology and immunobiology of infectious diseases. Interested applicants should send detailed curriculum vitae, an outline of current research interests, recent reprints, and three letters of reference to: **David H. Walker, M.D., Chairman, Department of Pathology, The University of Texas Medical Branch, Galveston, TX 77550. UTMB is an Equal Opportunity/M/F/V/H/Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.**

POSITIONS OPEN

FACULTY POSITION CELLULAR PHYSIOLOGY

The Physiology Department at Tufts University School of Medicine is seeking a faculty member (**ASSISTANT, ASSOCIATE, OR FULL PROFESSOR**) in the area of cellular physiology. The individual should have an active, funded research program focusing on signal transduction, second messengers, and/or ion channels. The successful candidate will join an enthusiastic, interactive faculty. Letter and curriculum vitae should be sent to: **Kathleen Dunlap, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

UNIVERSITY OF MICHIGAN PHYSICS/BIPHYSICS

The Department of Physics at the University of Michigan is conducting a search across a number of physics subspecialties, including biophysics, to fill a possible tenure-track position for which the area-of-specialization is undesignated. A new **FACULTY MEMBER** in biophysics would be expected (i) to initiate an independent research program that interacts well with some of the wide range of biophysics research projects already active at Michigan and (ii) to teach in the Department of Physics. Research space would be available in the Biophysics Research Division laboratories, a well-equipped interdepartmental center. Applicants for a junior-level position are preferred but senior-level applicants will also be considered. *Women and minority candidates are particularly encouraged to apply.* Please send curriculum vitae and a statement of your research and teaching background and plans, and direct three letters of recommendation, to:

**Daniel Axelrod
Chair, Biophysics Area Search Committee
Biophysics Research Division
University of Michigan
2200 Bonisteel Boulevard
Ann Arbor, MI 48109**

The University of Michigan is an Equal Opportunity/Affirmative Action Employer.

FULL-TIME CHEMISTRY/BIOLOGY FACULTY. Southwestern Oregon Community College, Coos Bay; 185-day tenure-track contract, \$22,500 to \$28,500. Requires recent master's in chemistry or biology, graduate work to support teaching in both areas, minimum of 1 year of graduate fellowship or full-time college teaching. Call **503-888-7259** or FAX **503-888-7285** for application/information by 18 March 1991. Closes 5 April 1991. *Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK FACULTY POSITIONS IN MOLECULAR PHARMACOLOGY (ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR, AND PROFESSOR) UNIVERSITY OF MINNESOTA

Applications are invited for several positions of assistant professor (tenure track) in the Department of Pharmacology, Medical School. Successful candidates are expected to establish an outstanding independent research program in the area of molecular neuropharmacology and to participate in departmental teaching responsibilities. Requirements include a Ph.D. in pharmacology, biochemistry, cell biology, or related field, or an M.D., and 2 years of postdoctoral research experience. Candidates with a strong research background and experience using recombinant DNA technology for studying pharmacological problems and/or molecular biology of the CNS are preferred. Applicants must have demonstrated involvement in quality research published in peer-reviewed journals.

Appointment as associate professor (tenured) or full professor (tenured) may be considered for applicants with professional distinction in published research and who have demonstrated effectiveness in teaching and advising. Appointment at these ranks must meet the minimum qualifications established by the University of Minnesota.

Applicants should send curriculum vitae, significant reprints, a statement of research plans, and three names for reference purposes to: **Dr. J. W. Miller, Professor and Chairperson of Search Committee, Department of Pharmacology, 3-249 Millard Hall, University of Minnesota, 435 Delaware Street, S.E., Minneapolis, MN 55455.** Deadline for receipt of applications is 15 April 1991.

The University of Minnesota is an Equal Opportunity Educator and Employer.

POSITIONS OPEN

PHYSICIAN-SCIENTIST. Sought for **TENURE-TRACK POSITION** in the Department of Psychiatry, Indiana University School of Medicine, funded through VA Medical Center and Institute of Psychiatric Research. Teaching appointment anticipated at associate/assistant professor level. Substantial research time available with laboratory facilities and basic support provided. Track record of funding biological psychiatry/neurobiology and Board-certification in psychiatry, or equivalent.

The Institute of Psychiatric Research has particular laboratory interest in the areas of receptor physiology, cellular neurophysiology, developmental neurobiology, and animal behavior genetics. Activation of a joint venture VA Medical Center-School of Medicine PET Center expected in spring of 1992.

Send curriculum vitae to: **Hugh C. Hendrie, M.B., Ch.B.,** Chairman of Department of Psychiatry and **Albert E. Sterne Professor,** Indiana University School of Medicine, 534 Clinical Drive, Cottages 110, Indianapolis, IN 46202-5110. Telephone: 317-274-4012.

Indiana University is an Equal Opportunity/Affirmative Action Employer and Contractor, M/F.

RETINAL CIRCUITRY FACULTY POSITIONS

The Department of Anatomy of the University of Pennsylvania invites applications for two positions at the rank of **RESEARCH ASSISTANT PROFESSOR:** (i) computational neuroscientist to collaborate on computations arising from studies of mammalian retinal circuitry; (ii) anatomist experienced in investigations of mammalian retinal circuitry willing and able to collaborate on computations. Space can be provided, but independent support is essential. Send curriculum vitae, statement of current research interests, and three references to: **Professor Peter Sterling, Retinal Circuitry Search, Department of Anatomy, University of Pennsylvania, Philadelphia, PA 19104-6058.** *Equal Opportunity/Affirmative Action Employer.*

ENVIRONMENTAL STUDIES

Gettysburg College invites applications for a **TENURE-TRACK POSITION** in environmental studies to commence with the 1991-92 academic year. Candidates should have a Ph.D. degree in one of the natural sciences and will be affiliated with the department most closely allied with her/his field of expertise. Initial responsibilities will include teaching courses in environmental science. In addition, the successful applicant will chair an Environmental Studies Committee and direct its efforts in developing an environmental studies curriculum, be responsible for preparing the annual budget, and participate in writing grant proposals for environmental studies. Gettysburg College is rated as a highly selective liberal arts college and is located 1½ hours from the Washington/Baltimore area. *Gettysburg College is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Submit letter of application, curriculum vitae, and three letters of recommendation to: **A. R. Cavaliere, Chair, Search Committee, Gettysburg College, Gettysburg, PA 17325.** Review of completed applications will begin 15 March 1991 and continue until the position is filled.

NEUROSCIENCE HARVARD MEDICAL SCHOOL MASSACHUSETTS GENERAL HOSPITAL

Several **JUNIOR FACULTY POSITIONS** are available in the Department of Neurobiology at Harvard Medical School and also in the Neuroscience Center at the Massachusetts General Hospital (MGH). We are interested in a wide range of subjects ranging from molecular structure to neuronal mechanisms underlying higher integrative functions. At the MGH Center, special consideration will be given to individuals whose work has direct bearing on human neurological and psychiatric disorders. However, all successful candidates will be expected to participate fully in the Harvard neuroscience community and become involved in training medical students, graduate students, and postdoctoral fellows. Applicants should submit their curriculum vitae, a brief statement of current research (including reprints, if available) and future plans, and the names of three individuals who might write on their behalf to: **Gerald D. Fischbach, Chairman, Neuroscience Search Committee, Harvard Medical School, 220 Longwood Avenue, Building B2, Room 420, Boston, MA 02115.** *Women and minority candidates are encouraged to apply. Harvard Medical School and the Massachusetts General Hospital are Affirmative Action/Equal Opportunity Employers.*

Schering

Research and Development Opportunities

*Take action
advancing recombinant DNA
technology.*

To maintain our leadership role in the health care industry, Schering-Plough invests a great deal of its resources and time in R&D. If you want to join a company that acts on the future today, consider one of the following positions involved in DNA research:

Molecular Biologist

As a senior scientist in Biotechnology Research and Development, you will develop novel recombinant DNA technologies. Your achievements will impact on application to specific problems of heterologous gene expression in *E. coli* and eucaryotic cells.

Requires a PhD in Molecular Biology, Molecular Genetics or a related field, 0-3 years' postdoctoral experience, thorough knowledge of Microbial and Cellular Biochemistry, and a background in DNA cloning and heterologous gene expression.

Research Scientists

You will be instrumental in DNA cloning, and the design/construction of expression plasmids. Requires a BSc or MSc in a microbiological discipline coupled with 0-7 years' experience and a successful track record manipulating microbial cultures using rDNA techniques.

Assistant/Associate Scientist

You will be actively involved in developing the methodology for characterization/assessment of recombinant bacterial cultures. Duties include study of novel gene expression and induction systems for high-level expression of recombinant products, their analysis, and host cell growth characteristics.

Requires a BSc or MSc in Microbiology and experience handling and preserving a variety of microorganisms. You should be well organized and possess excellent oral/written communication skills. Familiarity with process and strain improvement would be a definite asset.

We balance your professional contributions by offering competitive starting salaries, excellent benefits and the chance to make a significant contribution. For immediate consideration, send your resume, indicating position of interest, to: **Mr. M. Urdanick, Schering-Plough Corporation, 1011 Morris Avenue, Union, NJ 07083.** We are an equal opportunity employer.

What you have in mind, we put into action.



Schering-Plough

POSITION AVAILABLE

DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH,
ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, National Institute of Mental Health (NIMH).

The person selected for this position (located in Rockville, Maryland) will receive a career appointment to the Senior Executive Service (SES). The 1991 salary range for this position is \$87,000 to \$108,300 (or \$128,300 for physicians). SES members are also eligible for performance awards of 5 to 20 percent of base salary. Alternatively, this position may also be filled through an appointment in the Public Health Service Commissioned Corps.

The National Institute of Mental Health provides leadership, policies, and goals for the Federal effort to increase knowledge and develop effective strategies to deal with health problems and issues in the prevention and treatment of mental illness and in the promotion of mental health. Its programs include intramural and extramural research, the administration of training programs to meet national mental health manpower needs, and the provision of technical services to States and communities. The Director manages a staff of 1,000 and a budget of \$590 million, including over \$450 million for research.

Candidates must have progressively responsible experience in developing, administering, and evaluating programs relating to mental disorders or mental health, including programs of research, training, services, or prevention. Candidates must also demonstrate competence to assume leadership in planning, staffing, directing, coordinating, and allocating resources, and other responsibilities associated with executive leadership of a major national program. Minimum education requirements include a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field relating to the health sciences.

Further information about the position and qualification requirements may be obtained by contacting Ms. Carmen Garcia, on (301) 443-5030. An Application for Federal Employment, SF 171, accompanied by a current curriculum vitae and bibliography are to be submitted to Ms. Garcia at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C-26, Rockville, Maryland 20857. Applications will be accepted without the SF 171 provided that the SF 171 is submitted upon request. Complete applications (including the SF 171) must be postmarked by the closing date of the vacancy announcement, March 29, 1991. Late applications will not be accepted.

Applications from women and minority group members are solicited.

THE ALCOHOL, DRUG ABUSE AND MENTAL HEALTH ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER

STERLING RESEARCH GROUP

As the worldwide pharmaceutical research organization of Sterling Drug Inc., we strive to continually foster an environment where creativity, imagination and innovation flourish—where the foundation of cooperation and support enables you to explore new avenues.

ONCOLOGY/MOLECULAR BIOLOGY RESEARCH SCIENTIST

The Sterling Research Group is presently seeking a Molecular Biologist/Protein Biochemist. Position responsibilities include construction and expression of vectors containing growth factor receptors. Experience in enzyme assays and protein purification is desirable. Qualified candidates will possess a B.S. degree in Biology and two plus years' related experience, Master's degree or equivalent. Reference # RS-60.

DIAGNOSTIC IMAGING PRINCIPAL RESEARCH INVESTIGATOR

The successful candidate will serve primarily as the liaison between Sterling Research Group and the Center for Imaging and Pharmaceutical Research in the Department of Radiology at the Massachusetts General Hospital in coordinating discovery efforts for imaging agents.

Candidates should possess a Ph.D. in life or physical science and 3-5 years' experience beyond the postdoctoral level in discovery of novel imaging agents. Prior pharmaceutical experience is preferred, with practical experience in either MRI or ultrasound. Excellent interpersonal skills are necessary. This position is located at the Center for Imaging and Pharmaceutical Research in Boston. Reference # RS-06-91.

INFLAMMATION RESEARCH

We are expanding our Inflammation Program, and now have several key Research Investigation opportunities available:

Articular cartilage degeneration: Apply biochemical/molecular biological techniques to determine the relative importance of molecular targets for the treatment of articular cartilage diseases, and to demonstrate the ability of new molecules active against selected molecular targets to attenuate articular cartilage degradation.

In vivo biochemistry: Develop novel methods to demonstrate that target enzymes or receptors are inhibited in vivo. Current projects include metalloproteases and cytokines.

Monocytes in the central nervous system: Explore the therapeutic potential of monocyte targets within the central nervous system. Current molecular targets include neurotransmitters that act on glia and cytokines released by glia.

Candidates with experience in cell biology, molecular biology, biochemistry, joint physiology or in vivo biochemistry are encouraged to apply. The minimum requirements for these positions are a relevant Ph.D., expertise in one of the areas identified above, and the desire to join a team with a dynamic and innovative approach to inflammation. Reference # RS-99.

You will discover that we offer a very competitive salary and benefits package. The Sterling Research Group will be relocating to Upper Providence Township, Pennsylvania, in approximately 1993, and invites you to share in the opportunities now and in the future. Please indicate reference number and submit CV in confidence to: A.H. Murphy, Human Resources, Sterling Research Group, 81 Columbia Turnpike, Rensselaer, NY 12144. EOE M/F/H/V.



**STERLING
RESEARCH GROUP**

A Division of Sterling Drug Inc.
A Subsidiary of Eastman Kodak Company

SANDOZ AGRO LTD. wishes to recruit an

ENVIRONMENTAL TOXICOLOGY MANAGER

to work with SANDOZ CROP PROTECTION CORP., its subsidiary in Des Plaines, Chicago. USA.

The successful candidate, who will report to the Director of Analytical Sciences and Formulations, will be responsible for:

- Managing the technical and scientific staff and directing the activities of the Environmental Toxicology/Chemistry Group;
- Developing test programs for new product registrations, existing product support and similar areas;
- Coordinating internal and external projects and technical activities;
- Providing technical support and expertise both internally and to external partners.

The successful candidate will have a Ph.D. in one of the physical and/or biological sciences and several years' experience in Ecotoxicology, Environmental Chemistry or a related area. Good management skills, a knowledge of the US-EPA or similar regulations, and experience in dealing with regulatory agencies are essential.

Remuneration and other benefits will be to the standard normally associated with a multinational corporation.

Applications should be made in writing to:

Sandoz Agro Ltd.
Personnel Department
Reference 1807
P.O. Box
CH 4002 Basle
Switzerland



SANDOZ



Research
Center

Your Talent Can Take You Miles.

At Miles Pharmaceutical Division, you'll be involved in one of our four major research groups working on a broad range of leading-edge medical research projects.

As a worldwide pharmaceutical leader and research resource for Bayer AG, we can offer you the opportunity to take advantage of the vast resources, scientific challenges, high visibility and excellent growth potential you'll need to go the distance. Get a head start by applying for one of the following research positions:

PROTEIN BIOCHEMISTRY—BS/MS

We're seeking professionals at both the Bachelor's and Master's level with a minimum of 2-3 years' laboratory experience in enzymology and/or protein expression, purification and characterization. You'll be contributing to ongoing projects involving natural and recombinant biologicals. Additionally, experience in either conventional chromatography methods, HPLC, electrophoresis and protein expression in *E. coli*, is desirable.

PROTEIN BIOCHEMISTRY—PhD

You'll be involved in research relating to the isolation of biologically active natural and recombinant proteins and the development of assay procedures for use in structure-function studies. To qualify, you should have a Ph.D. in biochemistry and possess extensive experience in protein purification and characterization techniques.

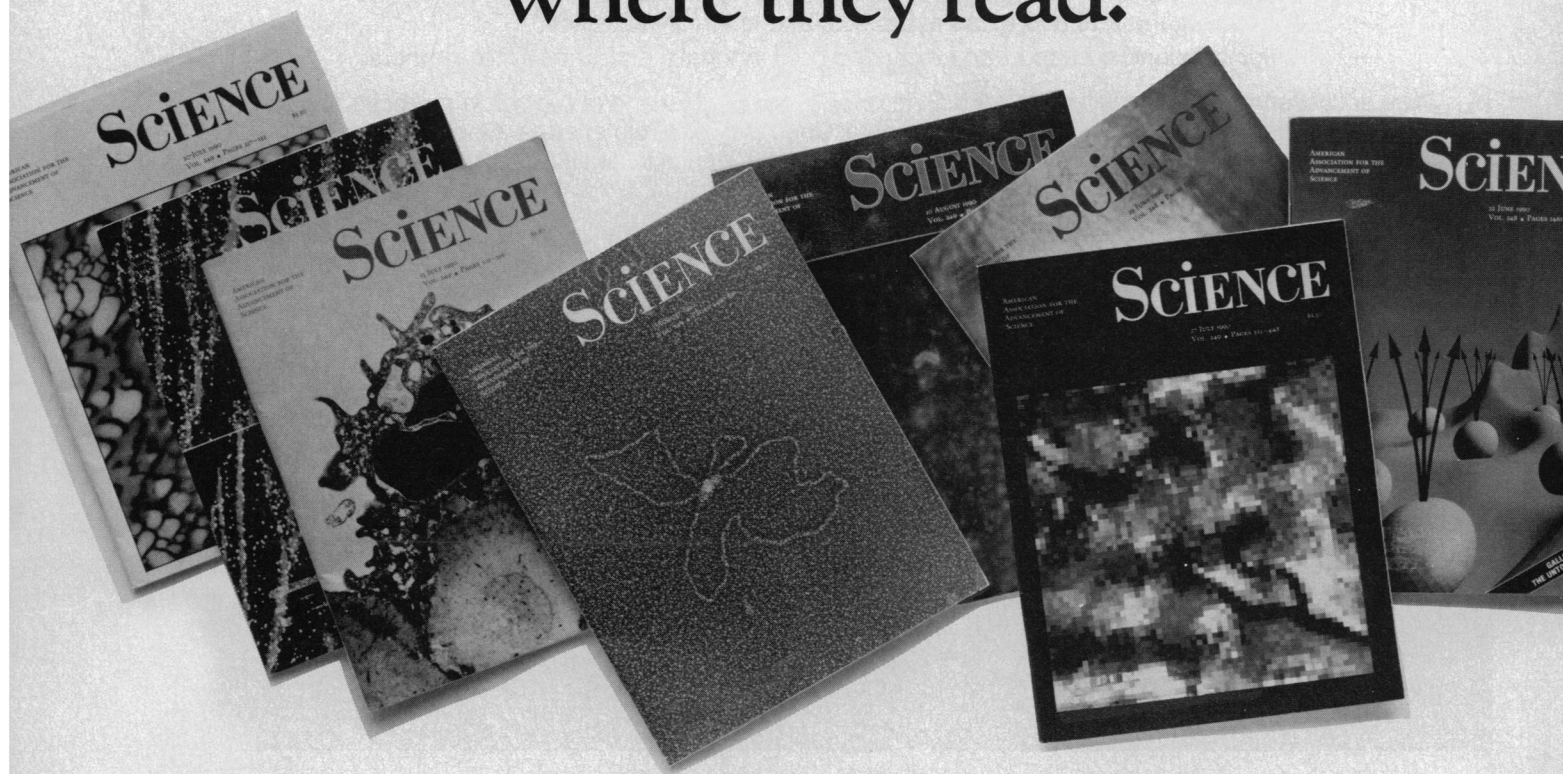
INFLAMMATION—BS/MS

We're seeking a professional with a BS/MS to conduct studies to identify and elucidate mediators of inflammation. Applicants must have 2-3 years' experience in biology, pharmacology, or a related discipline which includes demonstrated proficiency in handling small animals. Additional experience in leukocyte preparation, immune assays and electrophoretic techniques is also highly desirable.

We also offer an attractive compensation and generous benefits package. Resumes including salary history should be forwarded in confidence to: **Department CEC, Miles Pharmaceutical, 400 Morgan Lane, West Haven, CT 06516.**

An Equal Opportunity Employer M/F/H/V

The only way to tell
Scientists you've written a
book is to reach 'em
where they read.



You've written a book. You're proud of it. And you'd like your peers to know about it.

How to tell them?

Insist that your publisher advertise it in the world's most widely read scientific journal: SCIENCE.

The circulation of SCIENCE is more than three times that of its nearest competition. It's the prestige

publication among peer review journals. And it reaches the influential scientists and decision-makers you had in mind when you wrote your book.

If your book was worth writing, it's worth promoting. And selling. And there's no better way to do both than through the pages of the pre-eminent publication in the field: SCIENCE.

THE GLOBAL WEEKLY OF RESEARCH
SCIENCE

ADVERTISING REPRESENTATIVES
SCHERAGO ASSOCIATES, INC.

1515 Broadway, New York, N.Y. 10036 • (212) 730-1050



Director of Environmental and Occupational Medicine

University of Pittsburgh

The Department of Environmental and Occupational Health of the University of Pittsburgh seeks an outstanding candidate to serve as its Director of Environmental and Occupational Medicine. Depending upon qualifications, the initial appointment will be at the Associate or Full Professor level.

The Division is the focus of preventive and clinical activities in Environmental and Occupational Medicine at the University of Pittsburgh Medical Center (UPMC). The successful candidate will be the Director of an accredited residency program which is integrated with other training programs at UPMC.

The Department of Environmental and Occupational Health, of which the Division is part, is a newly established and expanding Department charged with providing mechanistic information necessary for the identification, prevention and assessment of health risks resulting from environmental and occupational exposures.

The successful candidate must have an M.D. or equivalent degree and be Board-certified or Board-eligible in Occupational Medicine. Applicant must have a record of achievements in research and practice of Environmental and Occupational Health as well as possess demonstrated administrative abilities.

Nominations, applications and supporting documentation should be sent to Carol K. Redmond, Sc.D., Committee Chair, Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, 130 DeSoto Street, Pittsburgh, PA 15261.

THE UNIVERSITY OF PITTSBURGH IS AN AFFIRMATIVE ACTION/
EQUAL OPPORTUNITY EMPLOYER

CHAIR, DEPARTMENT OF BIOCHEMISTRY and DIRECTOR OF FELS INSTITUTE FOR MOLECULAR BIOLOGY AND CANCER RESEARCH TEMPLE UNIVERSITY SCHOOL OF MEDICINE

A search for the combined position of the Chair of the Department of Biochemistry and Molecular Biology and the Director of the Fels Institute for Molecular Biology and Cancer Research has been initiated. Candidates should have proven leadership ability and must be nationally recognized for their scientific contributions to biochemistry and molecular biology with special interest in cancer research. The successful candidate must have demonstrated interest and ability in effective teaching and the capability of providing the administrative leadership to continue and extend the Department's and the Institute's established strengths in research, teaching and service. An excellent opportunity exists to expand an already strong department which now will merge with the Fels Institute for Molecular Biology and Cancer Research. The Department and the Institute also have a close working relationship to the Comprehensive Cancer Center and the Thrombosis Research Center.

Applications will be accepted until May 1, 1991 and should include curriculum vitae, a summary of current research, a description of teaching and administrative experience, and the names, addresses and telephone numbers of three or more references. Mail applications to:

Robert W. Colman, M.D.
Chair of the Search Committee
c/o Thrombosis Research Center
Temple University School of Medicine
3400 North Broad Street
Philadelphia, PA 19140

Temple University is an Affirmative Action/Equal Opportunity Employer, and encourages applications from women and members of minority groups.

Intramural Research Resources National Center for Research Resources National Institutes of Health

Deputy Director

The National Center for Research Resources (NCRR) is seeking applicants for the position of Deputy Director for Intramural Research Resources (DDIRR). This position is located in Bethesda, Maryland and is a Senior Executive Service position with a salary range from \$87,000 to \$100,500 per annum commensurate with qualifications. Additional salary incentives are available should a physician be selected for this position.

The Deputy Director for Intramural Research Resources is responsible for planning, directing and evaluating the Center's intramural programs. These programs provide centralized support services for the NIH in the following areas: (1) applications of engineering, mathematics, physics, and the physical sciences to the solutions of problems in medicine and biology; (2) professional and technical support services related to the provision, care and use of animals, along with research consultation and disease control services; (3) comprehensive research library support to NIH scientific, clinical and management programs through an extensive collection of books and journals, access to computer information banks, and staff assistance and consultation in information handling and retrieval; and (4) a visual communications program utilizing design, graphics, medical illustrations, photography and video recordings for documentation for medical research programs and data for all NIH information dissemination needs.

The Intramural Research Resources component, NCRR, is responsible for providing centralized engineering, scientific information, and technical services to all institutes and divisions of NIH and to the intramural programs of the National Institute of Mental Health, the Center for Biologics Evaluation and Research, the Food and Drug Administration, and the National Institute on Alcohol Abuse and Alcoholism in support of biomedical research. The programs are: (1) production, procurement, and holding of animals used in medical research projects, including Interagency Research Animal Committee (IRAC); (2) engineering design and fabrication of biomedical research instrumentation systems and equipment; (3) a multimedia visual communication program providing medical arts, fine and applied arts, and still and motion picture photography services; and (4) comprehensive research library support to the NIH scientific, clinical and management programs through an extensive collection of books and journals, access to computer information banks, and staff assistance and consultation in information handling and retrieval. The NCRR includes a total of 550 employees with a total budget of approximately \$336 million. The intramural division has approximately 450 employees and a budget of \$70 million. Applicants for this Senior Executive Service position must have a doctoral level degree or equivalent in one of the biomedical sciences. Send applications to:

Ms. Pathenia Wiggins
National Center for
Research Resources
Bldg. 31, Room 2B09
9000 Rockville Pike
Bethesda, MD 20892



For an application and a copy of the requirements, contact Ms. Wiggins at NCRR on (301) 496-1524.

Deadline for applications is March 18, 1991.

Public Health Service Commissioned Officers interested in performing the duties of the position within the Commissioned Corps may submit a resume to the above address.

NIH is an Equal Opportunity Employer

Drug Metabolism Opportunities

Searle, a leader in pharmaceutical research, development and marketing has excellent opportunities for Ph.D. level scientists in our Department of Drug Metabolism.

SECTION HEAD

The candidate we select will provide a leadership role for the Department of Drug Metabolism. The section has responsibility for novel method development of bioanalytical assays utilizing HPLC, GC, HPLC-MS, RIA, and Robotics, as well as identification and reduction to practice state-of-the-art technologies for bioanalytical assays and metabolism studies.

We require a Ph.D. in Chemistry or Biochemistry and seven years of applicable experience in drug metabolism and bioanalytical method development including mass spectrometry, HPLC, GC, laboratory automation and immunoassays. Demonstrated managerial skills are required.

SR. RESEARCH INVESTIGATOR

The candidate for this position will use state-of-the-art technologies including robotics and analytical mass spectrometry in the implementation, modification and validation of assays of drugs and test articles. This position will be responsible the training and supervision of a group for of five analytical chemists to support preclinical and clinical studies. The individual will also provide key collaborative interface with Drug Metabolism scientists, Clinical Investigators and contract laboratory personnel.

POST DOCTORAL ASSOCIATE

The candidate for this position will conduct research in pharmacokinetics and mechanisms of drug absorption. A Ph.D. in pharmaceutical science or related area is required. Please include 3 letters of recommendation.

For consideration, please send your resume in confidence to: **Searle, Human Resources, Dept PB12, 4901 Searle Parkway, Skokie, IL 60077.** An equal opportunity employer M/F/H.



Harvard Graduate School of Education Position in Teaching and Learning

The Harvard Graduate School of Education seeks to fill a position at the junior (non-tenure) level or senior (with tenure) level in its Teaching, Curriculum, and Learning Environments Area. The focus of the position is on teaching and learning, with an emphasis in science education. Candidates are expected to have academic strength within a field of science as well as a record of creative scholarship/research in the teaching/learning process associated with this field. Candidates are also expected to have a substantial historical and philosophical understanding of one of the science fields as well as approaches to the teaching of science in the schools. Among the responsibilities of the position is teaching science curriculum and pedagogy courses in Harvard's preservice and experienced teacher education programs.

Applications or nominations should be received no later than March 15, 1991 and should include curriculum vitae, description of research in progress and two recent articles or monographs. Send to Dr. Vito Perrone, Chair, Search Committee, Harvard Graduate School of Education, c/o Academic Services, 122 Longfellow Hall, Cambridge, MA 02138.

Applications from women and minority candidates are especially welcomed. Harvard University is an affirmative action/equal opportunity employer



DEPARTMENT OF MOLECULAR BIOLOGY

UMDNJ-SCHOOL OF OSTEOPATHIC MEDICINE

The School of Osteopathic Medicine of the University of Medicine and Dentistry of New Jersey is reopening its search for a Chairperson for the Department of Molecular Biology. We are seeking applications and nominations of distinguished academic scientists dedicated to educational programs of high quality and having administrative experience to serve as the founding departmental Chairperson. The new department consists of five faculty and is expected to grow to fifteen faculty under the leadership of the new Chairperson. The present faculty are young and vigorous and encompass research programs in muscle protein biochemistry, cellular DNA repair processes, cell motility and mechanisms of signal transduction. The department will have responsibility for the instruction of medical students in the disciplines of Biochemistry, Microbiology, Genetics and Pharmacology.

Although we are seeking individuals with research interests in any area of modern Molecular Biology, we are particularly emphasizing recruitment of individuals with research interests in mechanisms of oncogene expression, control of growth factor receptors and molecular immunology. Appointment will be made at the Professor level with a starting date as early as September 1, 1991.

Letters of application, curriculum vitae and the names, addresses and telephone numbers of four references should be submitted to: **Dr. Richard Schimmel, Acting Assistant Dean for Basic Sciences, Department of Cell Biology, UMDNJ-SOM, 401 South Central Plaza, Stratford, NJ 08084.** The UMDNJ is an affirmative action/equal employment opportunity employer, M/F/H/V, and a member of the University Health System of New Jersey.



FACULTY POSITIONS

ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES INSTITUTE (EOHSI), an interdisciplinary research institute, is jointly sponsored by Rutgers, The State University of New Jersey and the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School (UMDNJ).

Positions available are:

ANALYTICAL CHEMIST: expertise in GC/MS, strong background and interest in analytic development, requires participation in collaborative research

DEVELOPMENTAL BIOLOGIST: expertise in contemporary morphological techniques and research interest in developmental neurotoxicology.

The appointment will be in either Rutgers, The State University of New Jersey or UMDNJ-Robert Wood Johnson Medical School. Faculty rank depends upon qualifications. Ph.D in appropriate discipline required. Ability to develop independent and externally funded research is essential.

EOHSI comprises research, education and service programs in a setting that facilitates interaction among experts in environmental health, exposure assessment, toxicology, occupational health, public policy and health education

Send curriculum vitae, a statement of research interests, and the names of four references by **April 1, 1991 to: Analytical Chemist/Developmental Biologist Search Committee, Attention: Rebecca Shaiman, Environmental and Occupational Health Sciences Institute, 675 Hoes Lane, Piscataway, NJ 08854.**

Rutgers and UMDNJ are affirmative action/equal opportunity employers and welcome applications from women and minorities.

Dean, College of Science

Texas A&M University

The College of Science is comprised of the Departments of Biology, Chemistry, Mathematics, Physics and Statistics, and the Cyclotron Institute. The College has 270 faculty, 2,330 undergraduate majors, 778 graduate students, and a total research and teaching budget of approximately \$39,000,000. Ph.D. programs are offered in all departments. Texas A&M University is a major teaching and research institution and ranks in the top ten nationally in research funding, number of national merit scholars, total student enrollment (41,000), and value of its permanent endowment.

The successful applicant will have an outstanding record of achievement in teaching and research and have demonstrable administrative skills. Effective communication with multiple constituencies, a talent for management of complex organizations, and a sense of visionary leadership will be especially important.

Applications, consisting of a resume and the names of five persons from whom we may request letters of reference, will be accepted until April 15, 1991, or until the position is filled. Women and minorities are especially encouraged to apply.

Texas A&M University is an equal opportunity, affirmative action employer.

Respond to:

Dr. John A. Shaddock, Chair
Search Committee, Dean of Science
Texas A&M University
College Station TX 77843-4468
Phone: 409/845-3517
FAX: 409/845-6739

Research Scientist

Metra Biosystems, Inc. is a young and growing biotechnology company whose vision is to be a preeminent company focused on the development of diagnostic products for connective tissue diseases. We currently have an opening for a Research Scientist.

Candidate for this position must have a Ph.D. in Biochemistry or a related discipline with extensive research experience in purification and characterization of extracellular matrix proteins.

Metra Biosystems offers competitive salaries, equity compensation and strong connections with experts in all aspects of connective tissue research. Please forward your curriculum vitae to:

Metra Biosystems, Inc.
Human Resources Department
3181 Porter Drive
Palo Alto, CA 94304.

MAMMALIAN CELL EXPRESSION, CELL BIOLOGY

Chiron Corporation, a recognized leader in biotechnology and molecular biology is seeking a highly motivated individual to work in the area of mammalian cell expression. Initially the expression of various novel growth and differentiation factors will be targeted. The position requires a Ph.D. and 3-8 years of experience in the field. An ability to perform independent research must be demonstrated by a record of publication in peer reviewed journals. The successful candidate will work towards the development of novel methods for the expression of eukaryotic proteins in various cell types, with particular emphasis on high level expression, secretion and posttranslational modification. An ability to interact with multidisciplinary groups working towards the production of clinically important products is essential.

DNA SEQUENCING

Automation, Molecular Biology and Sequence Analysis

A second position is available within the Chiron DNA sequencing group. The position is at the Ph.D. level, and will involve the development of techniques for automated DNA sequencing using state-of-the-art equipment. The successful candidate will be expected to apply the techniques developed to the sequencing of DNA within a core facility service. In addition, the sequencing and analysis of novel DNAs from a variety of eukaryotic systems will be targeted.

Chiron Corporation, located in the San Francisco Bay Area, offers a stimulating and challenging research environment, a competitive compensation package and opportunities for professional advancement. Candidates please send C.V. and two references to **Chiron Corporation, Human Resources Dept.: MB-016, 4560 Horton St., Emeryville, CA 94608.**



Formulation & Drug Delivery Scientist

Genentech, Inc. is the leading biotechnology research and pharmaceutical production company, publishing a paper approximately every day and a half. Currently, we are seeking a Formulation & Drug Delivery Scientist for our Pharmaceutical R&D department to help us continue our success.

You will design and supervise laboratory studies leading to the development of new dosage forms/delivery systems for protein pharmaceuticals with particular emphasis on sustained release delivery systems. These studies include the design and evaluation of the dosage form, the study of protein release from formulation matrices, and the physical and chemical characterization of the protein with regard to its stability, its interaction and compatibility with the formulation and manufacturing process.

To qualify, you must have a Ph.D. or equivalent in Physical Chemistry, Biochemistry or Biophysical Chemistry. The ideal candidate will have at least 2 years' industrial or post-doctoral experience in physical protein chemistry or formulation of protein drugs. A working knowledge of analytical and physical biochemistry techniques such as spectroscopy, chromatography and electrophoresis is essential. Experience with polymer chemistry, aggregation phenomena, protein stability and mass transport phenomena is also desired.

Our progressive company offers an exceptional compensation and benefits package and the opportunity to make a significant contribution to our organization. For immediate consideration, please send your resume to Genentech, Inc., Human Resources Dept. LS291, 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal opportunity employment.

Genentech, Inc.

MOLECULAR BIOLOGIST

DNAX Research Institute is seeking two scientists to join the staff of our Molecular Biology Department. Candidates should hold either a Ph.D. or M.D. degree and have completed postdoctoral training.

The Institute conducts basic research in a variety of areas of molecular and cellular biology with an emphasis on cytokines and growth factors controlling the immune system and hemopoietic cells. We invite applicants whose research interests could take advantage of these established strengths. We are particularly interested in individuals employing molecular or biochemical approaches to cellular receptors and signal transduction, cell-cell interaction and cell adhesion molecules, or transgenic mouse models, but applicants with related interests are also encouraged to apply.

PROTEIN CHEMIST

A third position is available for a biochemist to be involved in the characterization of novel immunological and hematopoietic factors. This position is an interactive one that calls for creative and productive collaborations with DNAX cellular and molecular biologists to isolate and characterize new factors. This position requires an expertise in advanced methods of protein purification and analytical techniques including amino acid analysis and peptide sequencing.

Successful candidates will be expected to establish an independent research program in their areas of interest, and will have the opportunity to conduct basic research in the absence of teaching and grant-writing responsibilities. Institute scientists may work with postdoctoral fellows and are free to communicate their scientific findings in an open manner.

DNAX Research Institute, located near Stanford University, carries out basic research in Immunology and Molecular Biology in an open, academic environment. We are looking for individuals who can contribute to our enthusiastic and productive research program.

Interested applicants should send a curriculum vitae and the names of three references to: **Human Resources Dept., DNAX Research Institute, 901 California Avenue, Palo Alto, CA 94304.** DNAX is an equal opportunity employer, m/f/h.

DNAX
Research Institute

POSITIONS OPEN

HIV CELL BIOLOGIST/VIROLOGIST

FACULTY POSITION (ASSISTANT OR ASSOCIATE PROFESSOR LEVEL) for Ph.D. or M.D. to establish research and diagnostic laboratory as component of multidisciplinary research program in children with AIDS. In addition, opportunity to develop personal research interests in either basic or clinical aspects of AIDS. Knowledge and experience required in cell culture, PCR, RIA, ELISA, and blotting techniques related to HIV. Contact: **Walter T. Hughes, M.D., St. Jude Children's Research Hospital, Memphis, TN 38101.** *Affirmative Action/Equal Opportunity Employer.*

PLANT PHYSIOLOGIST. Applications are invited for a temporary 9-month appointment during the 1991-92 academic year. The primary responsibilities will be to teach a lecture/laboratory course in plant physiology during the fall semester, give lectures in general biology in the spring semester, and seminar participation. Send curriculum vitae, the names and telephone numbers of three references, and a description of teaching interests and experience to: **Thomas C. Vogelmann, Department of Botany, Box 3165, University of Wyoming, Laramie, WY 82071-3165.** Review of applications will begin 1 April 1991. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS. For Ph.D.'s in an interdisciplinary program at Brown University applying cell biology, physiology, biochemistry, toxicology, and molecular biology to problems of lung disease. Funding under National Institutes of Health Institutional NRSA. *Candidates from minority groups are especially welcome.* For more information, please contact **Dr. Frederic G. Hopkin, Jr., Director of Pulmonary Medicine, Brown University, Box G, Providence, RI 02912.** Telephone: 401-722-6000, ext. 2636.

POSTDOCTORAL POSITION

A postdoctoral position is available in the field of developmental toxicology. Limb development, both normal and disturbed, is being studied using cultured mouse limbs. Applicants should have a Ph.D. in cellular and molecular biology or related disciplines and a good knowledge of cell pathology. The candidate will have demonstrated expertise in molecular biology techniques. Experience with tissue culture is essential. The position is available immediately and will extend for 2 years, beginning when a successful candidate is identified. Salary will be commensurate with experience. For more information, please write to: **Dr. C. G. Rousseaux, Department of Veterinary Pathology, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.**

POSTDOCTORAL POSITION FRED HUTCHINSON CANCER RESEARCH CENTER (FHCRC)

A position is available immediately to study the cell and molecular biology of B cell differentiation. Research in progress focuses on the reconstitution of the B cell repertoire in bone marrow transplant recipients. Experience in molecular biology or immunology is necessary. Please submit a letter describing current and past research activities, your curriculum vitae, and two letters of recommendation to: **Carol Nottenburg, Ph.D., Division of Clinical Research, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, WA 98104.** *FHCRC is a smoke-free environment and an Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Available for investigations of cellular/molecular mechanisms of neurodegenerative diseases. Our laboratory uses a variety of approaches to study several human neurodegenerative diseases, including Alzheimer's disease and motor neuron disease, and related animal models. This position is part of a research program dealing with several research areas, including the neuronal cytoskeleton, transmitter systems, the amyloid precursor protein, and trophic factors.

Send curriculum vitae and two letters of recommendation to: **Donald L. Price, M.D., Neuropathology Laboratory, The Johns Hopkins University School of Medicine, 509 Pathology Building, 600 North Wolfe Street, Baltimore, MD 21205-2181.** *Affirmative Action/Equal Opportunity Employer. We encourage applications from minorities. Because of funding requirements, applicants limited to U.S. citizens/permanent residents.*

POSITIONS OPEN

POSTDOCTORAL POSITION IN MOLECULAR/CELLULAR BIOLOGY. A position is available immediately for an NIH-supported study on molecular mechanisms of liver fibrogenesis. Send curriculum vitae and names of three references to: **Dr. H. Tsukamoto, Director, G.I. and Liver Research Unit, Research Building, Veterans Administration Medical Center, 150 Muir Road, Martinez, CA 94553.**

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY. To investigate the action of proto-oncogenes in brain and retina. Projects include signal transduction in growth cones and cloning tyrosine kinases and substrate genes. Candidate should have Ph.D. with experience in recombinant DNA technology and/or protein biochemistry. Send curriculum vitae and names and numbers of three references to: **Patricia F. Maness, University of North Carolina School of Medicine, 505 FLOB CB# 7260, Chapel Hill, NC 27599-7260.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY. Available immediately to study molecular mechanisms of differentiation-dependent gene expression and metabolic regulation of lipid biogenesis. Experience in cloning, sequencing, mammalian expression, cell culture, and animal experiments desirable. Please send curriculum vitae and names of three references to: **Dr. James M. Ntambi, Department of Biochemistry and Molecular Biology, Georgetown University, 3900 Reservoir Road, N.W., Washington, DC 20007.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN SIGNAL TRANSDUCTION. A postdoctoral position to study phospholipase C- and phospholipase D-dependent signal transduction processes in liver cells is available immediately in an active, well-equipped, and well-funded interdisciplinary research team. Prior experience in cellular signal transduction work is a plus. *Must be a U.S. citizen or permanent resident.* Send curriculum vitae, statement of research interests, and names of three references to: **Jan B. Hock, Ph.D., Department of Pathology and Cell Biology, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107.** We are committed to a smoke-free environment. *Equal Opportunity Employer.*

POSTDOCTORAL ASSOCIATE

Funded postdoctoral position for molecular, cellular, and transgenic analyses of gene expression in development of mouse pigment cells and conversion to melanomas. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Beatrice Mintz, Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.**

POSTDOCTORAL POSITIONS. Available to study: (i) DNA photolyase and the mechanism of enzymic photorepair of DNA damaged by ultraviolet light; (ii) structure/function relationships in bacterial sarcosine oxidase, a multisubunit tetrahydrofolate-binding protein containing both covalent and noncovalent flavin. Applicants with an interest in enzymology, recombinant DNA technology, or photochemistry are encouraged to send curriculum vitae and names of three references to: **Dr. Marilyn Jorns, Department of Biological Chemistry, Hahnemann University School of Medicine, Broad and Vine, Philadelphia, PA 19102.**

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE POSTDOCTORAL TRAINING IN NEUROPATHOLOGY

Positions available as of 1 July 1991 for studies in the neuronal cytoskeleton and Golgi apparatus, neuroimmunology and complement, and oncogenes. *Applicants must be citizens or permanent residents of the United States.* Interested individuals should apply to: **Nicholas K. Gonatas, M.D., University of Pennsylvania Medical School, Department of Pathology and Laboratory Medicine, 418 Johnson Pavilion/6079, Philadelphia, PA 19104-6079.**

The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.



Magainin Sciences Inc.

As a rapidly developing Pharmaceutical company, we are seeking scientists with commitment, excellent training and communication skills at all levels to expand our drug research and developing efforts in the following key area:

Analytical Chemist/Biochemist

Candidates should have interest and experience in:

- **Peptide analysis**
- **Formulation/product analysis**
- **Biological sample development/analysis**
- **Establishing specifications**
- **Analytical method validation**
- **GLP/GMP Compliance Program**

We are seeking a Ph.D with 0 to 4 years experience or M.S. with 3+ years experience – preferably in the pharmaceutical industry or biomedical research.

For consideration, please submit curriculum vitae, description of research interests and salary requirements to: **Director of Human Resources, MAGAININ SCIENCES, INC., 5110 Campus Drive, Plymouth Meeting, PA 19462.**

Magainin Sciences, Inc., is located in new state-of-the-art facilities in suburban Philadelphia. We offer excellent salaries, benefits, outstanding scientific interactions and the opportunity to change the future of therapeutics. An Equal Opportunity Employer.

The Fogarty International Center Announces

EXCHANGE VISITS TO EASTERN EUROPE AND U.S.S.R.

The Fogarty International Center of the National Institutes of Health encourages applications for short-term exchange visits by U.S. health professionals or biomedical scientists (U.S. citizens or permanent residents) to Bulgaria, Hungary, Poland, Romania and the Soviet Union to undertake joint biomedical or behavioral research or to explore prospects for collaboration.

The Fogarty International Center will provide round-trip air fare for the participants. The host country will pay for lodging, in-country travel and a daily living allowance.

Applications are received continuously for review on March 1, June 1, Sept. 1, and Dec. 1.

For more information on this program and application forms, please contact:

**U.S.-Eastern European Health Scientist Exchanges
Fogarty International Center
Building 31, Room B2C35
National Institutes of Health
Bethesda, Maryland 20892
Telephone (301) 496-4784
FAX (301) 480-3414**

Research Opportunities in ENZYME STRUCTURE AND MECHANISM

The Department of Biochemistry at Wake Forest University Medical Center is in the process of strengthening its research programs in the areas of protein engineering and molecular genetics. State-of-the-art facilities for automated protein sequence analysis and peptide and oligonucleotide syntheses are already available through the recently established institutional Program in Molecular Genetics. In addition, departmental faculty have access to the GCG sequence analysis software and database updates through a VAX-based network. A new Evans & Sutherland ESV molecular graphics workstation provides an excellent resource for molecular modeling and other protein engineering applications.

The Department of Biochemistry presently has openings at both faculty and postdoctoral levels for research in enzyme structure and mechanism, as described below:

- 1) **Assistant Professor** – applicants should have 2 years' post-doctoral experience in enzyme structural or mechanistic work, focusing on applications of modern mutagenesis approaches.
- 2) **Postdoctoral fellows** – positions available for molecular biology and protein structure-function studies, including enzymes of lipid metabolism (M. Waite) and membrane transport proteins (S. Hutson), and for *in vivo* NMR spectroscopy (C. Cunningham).

Candidates for the faculty position should submit a curriculum vitae, a brief description of research plans, and the names of three references. Screening of applicants will begin in early April and will continue until the position is filled. Send applications to:

**Dr. Al Claiborne
Department of Biochemistry
Wake Forest University Medical Center
300 South Hawthorne Road
Winston-Salem, NC 27103
Phone: (919) 748-3914 FAX: 919-748-7671
e-mail: AC@ESV.BGSM.WFU.EDU**

An Equal Opportunity/Affirmative Action Employer

CELL PHYSIOLOGY WASHINGTON UNIVERSITY MEDICAL SCHOOL

The Department of Cell Biology & Physiology, Washington University in St. Louis is expanding its commitment to Cellular Physiology and Biophysics. We are searching for individuals whose research interests focus on the biophysical aspects of membranes, particularly as it relates to physiological processes, and who wish to develop innovative approaches to fundamental questions in a multidisciplinary environment. Both entering and senior scientists will be considered. Candidates, who hold a M.D. or Ph.D., should send a curriculum vitae, the names of 3 references and a brief synopsis of research interests to:

**Dr. Philip Stahl
Department of Cell Biology and Physiology
Washington University Medical School
660 South Euclid Avenue
St. Louis, MO 63110**

POSITIONS OPEN

POSTDOCTORAL POSITION. To study the biochemistry and cell biology of α_2 -macroglobulin receptor. Laboratory goal is to establish the function of this receptor system and to elucidate the structure and function of each polypeptide associated with this receptor complex. Recent graduate in biochemistry, molecular biology, or cell biology preferred. Competitive salary, excellent benefits, and superb working conditions in new facility. Send curriculum vitae and a list of three references to: **Dr. Dudley Strickland, Biochemistry Laboratory, American Red Cross, 15601 Crabbs Branch Way, Rockville, MD 20855. Equal Opportunity Employer, M/F/V/H.**

POSTDOCTORAL POSITION. Available immediately, NIH-funded for up to 4 years, (i) investigating expression of cDNAs and antisense ribozymes for/against human cytoskeletal proteins using mammalian expression vectors and gene transfer techniques, or (ii) developing immunologic tests with protein isoform-specific antibodies and PCR tests for protein isoform mRNA expression in tissues and cells. Prior experience required. Starting salary: \$23,000 per year. Send curriculum vitae, references, and a brief description of research background and interests to: **John Leavitt, Ph.D., Cancer Cell Biology, Palo Alto Medical Foundation Research Institute, 860 Bryant Street, Palo Alto, CA 94301. Telephone: 415-326-8120.**

POSTDOCTORAL POSITION IN IMMUNOLOGY

Position available immediately at the University of California, San Francisco (UCSF), in HIV immunopathogenesis. Projects include definition of cytotoxic T cell specificity for HIV processed peptides and development of T cell clones directed at structural and regulatory HIV proteins. Immunology experience essential. Familiarity with molecular biology or peptide chemistry is desirable. Send curriculum vitae and names of references to: **Dr. Daniel Stites, UCSF, Box 0100, San Francisco, CA 94143. UCSF is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. Reproductive biology. Recent Ph.D.'s with basic science, medical, agricultural, or veterinary science background and demonstrated performance in mammalian reproductive biology. Particularly interested in individuals wishing to gain experience in the molecular and cell biological aspects of either gametes and early embryos or endocrine control of reproduction. Individuals are encouraged to work with more than one faculty member to promote an interdisciplinary approach to problems. Only U.S. citizens and permanent residents eligible. Send curriculum vitae, summary of research interests, and three reference letters to: **Dr. John D. Biggers, Harvard Medical School, LHRB, 45 Shattuck Street, Boston, MA 02115. An Equal Opportunity/Affirmative Action Employer.**

HUMAN LINKAGE MAPPING

One or two **POSTDOCTORAL POSITIONS** open 1 April 1991, or soon thereafter, to participate in NIH-funded studies on human microsatellite DNA polymorphisms in the laboratory of Dr. James Weber. Project will include developing and mapping new polymorphisms, investigating origins and evolution of microsatellites, improving genotyping technology, and mapping genetic disease genes. Very competitive salary and benefits. Send curriculum vitae and names of three references by 15 March 1991 to: **Employment Representative, M. L. Marshfield Clinic, Human Resources, 1000 North Oak Avenue, Marshfield, WI 54449. Equal Opportunity Employer, M/F/H/V.**

HUMAN MOLECULAR CYTOGENETICS

POSTDOCTORAL POSITIONS are available to join active research groups investigating origin of chromosome abnormalities in human gametes and early pregnancies, molecular analysis of the fragile X mutations, and genome analysis of the human metaphase band Xq28. Experience in molecular biology is required.

Send curriculum vitae, reprints, other supporting documents, and three letters of reference to: **Dr. Terry J. Hassold, Department of Pediatrics, Division of Medical Genetics, or Dr. Stephen T. Warren, Department of Biochemistry, Rollins Research Center, Emory University School of Medicine, Atlanta, GA 30322. Emory University is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION. For recent Ph.D. to study the molecular characterization of prohormone processing enzymes required for the biosynthesis of peptide neurotransmitters. This project involves bacterial expression of prohormone cDNAs, in vitro mutagenesis for determination of proteolytic cleavage site specificity, and molecular cloning of processing enzymes. Experience in molecular biology is required. Send curriculum vitae and names of three references to: **Dr. Vivian Hook, Department of Biochemistry, Uniformed Services University of the Health Sciences, Bethesda, MD 20814.**

MOLECULAR NEUROBIOLOGY

POSTDOCTORAL POSITION. Available immediately for structure/function studies on voltage-sensitive calcium channels. Molecular cloning or electrophysiology background helpful. Studies so far mainly use *Xenopus* oocyte expression system. Send curriculum vitae and names with addresses of three references to: **Dr. John P. Leonard, Department of Biological Sciences, M/C 066, University of Illinois at Chicago (UIC), Box 4348, Chicago, IL 60680. UIC is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH POSITION

A position is available immediately for a Ph.D. neuroscientist with interest in Parkinson's disease and expertise in molecular biology of receptor regulation and characterization. Salary is commensurate to research accomplishment. Apply with curriculum vitae and three references by 15 April 1991 to: **Dr. M. Ebadi, Department of Pharmacology, University of Nebraska College of Medicine (UNMC), 600 South 42nd Street, Omaha, NE 68198-6260. UNMC is an Affirmative Action/Equal Opportunity Employer.**

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Foundation, a nonprofit-making organization within the Hayashibara Group, announces a fellowship program. Fellowship will be taken at the Fujisaki Cell Center which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. No fixed deadline for application is set throughout the year. The awards are for high-quality research work in one of the three categories described below:

- Fundamental leukemia-lymphoma research
- Cytokine-lymphokine research
- Hematopoietic cell lines

Qualified person who is holding a Ph.D., M.D., or equivalent qualifications should make inquiry for additional information and application forms from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

POSTDOCTORAL FELLOWSHIP

The Cellular and Molecular Biology Group in the Life Sciences Division of the Los Alamos National Laboratory is seeking a postdoctoral fellow to perform basic cellular and molecular biological research in the area of mechanisms of carcinogenesis. In particular, we are interested in the role of chromosomal instability in neoplastic progression with emphasis on the clastogenic properties of early proteins of the small DNA tumor viruses. Individuals with a strong background in both cellular and molecular biology are encouraged to apply. Applicants should have received their doctoral degree within the past 3 years. Postdoctoral appointments are for 1 year, renewable for a second year. The salary range is \$36,666 to \$38,619 per year. For further information contact: **Paul M. Kraemer, Ph.D., Cellular and Molecular Biology Group, Life Sciences Division, MS M888, Los Alamos National Laboratory, Los Alamos, NM 87545. Telephone: 505-667-2750; FAX: 505-665-3024.** To formally apply, please send curriculum vitae, a letter describing research interests, employment application, three letters of reference, and graduate and undergraduate transcripts to: **Ronnie Cohen (MS P280), Human Resources Development Division PD-91-081, Los Alamos National Laboratory, Los Alamos, NM 87545. For employment applications: telephone: 505-667-0872. Los Alamos is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH FELLOWSHIPS. Two positions are available to (i) study the regulation of a polycyclic hydrocarbon-inducible cytochrome P450IA2 in liver, and (ii) investigate the mechanisms of induction of a DNA repair protein by irradiation in cells and liver. A background in molecular biology and/or molecular pharmacology would be useful. Send curriculum vitae and the names of three referees to: **Edward Bresnick, Ph.D., Department of Pharmacology and Toxicology, Dartmouth Medical School (DMS), HB 7650, Hanover, NH 03756. DMS is an Equal Opportunity/Affirmative Action Employer.**

GLOBAL CHANGE POSTDOCTORAL FELLOWSHIPS

Global Change Distinguished Postdoctoral Fellowships provide opportunities related to the U.S. Global Change Research Program. This program encompasses the full range of earth system changes including physical, chemical, biological, geological, and social. Fellowships are tenable at approved federal and university laboratories including those of the Department of Energy, NASA, NCAR, USDA, and other agencies. Stipends are \$35,000. A doctoral degree received after 1 May 1988 is required as is U.S. citizenship or PRA status. Deadline is 1 May 1991. Contact: **Global Change Distinguished Postdoctoral Fellowships, Science/Engineering Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-4805.**

RESEARCH FELLOWSHIPS IN EPIDEMIOLOGY OF LUNG DISEASES. NIH-supported stipends and tuition fees for a 2-year program working in airways hyperreactivity and/or natural history studies on chronic lung disease along with didactic training in epidemiology leading to a master's degree from Harvard University. Must be eligible in internal medicine or equivalent. Candidates with clinical training in pulmonary diseases preferred but not required. Available for U.S. citizens and permanent visa holders. Inquire: **Frank B. Speizer, M.D., Professor in Medicine, Harvard Medical School, Co-Director, Channing Laboratory, Department of Medicine, Brigham and Women's Hospital, 180 Longwood Avenue, Boston, MA 02115. This program specifically encourages applications by minority group members. The Brigham and Women's Hospital is an Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION

Position available immediately to study the vitamin A-mediated regulation of mammalian spermatogenesis at Washington State University. A recent Ph.D. experienced in the basic techniques of molecular biology and interested in reproductive biology would be preferred. Please send curriculum vitae and names of three references to: **Dr. Kwan Hee Kim, Department of Biochemistry/Biophysics, Washington State University, Pullman, WA 99164-4660. Deadline: 30 June 1991.**

Washington State University is an Equal Opportunity/Affirmative Action Employer.

We'll Help You Build A New Lab



Let the free Science product information service put you in touch with the vendors whose products you will need.

Simply write us a letter stating the specifics about your proposed lab and the instruments and supplies you need. We will do the rest. Write to:

SCIENCE Magazine
New Lab Service Department
1515 Broadway
New York, NY 10036 **Science**

Infectious Disease

Research Scientist

Research Associate

Searle Research and Development is seeking qualified individuals for two positions at our St. Louis (Chesterfield) Missouri location; Ph.D.-level Research Scientist and Research Associate requiring an M.S. degree.

Both positions will participate in an interdisciplinary program directed toward the discovery of novel therapeutic modalities for the treatment of human infectious diseases. Specific responsibilities will include identification and evaluation of potential molecular targets for the control of human pathogens and development of models to test antiviral, anti-fungal, and anti-bacterial agents. Research Scientist position also requires implementation of an independent research program. Expertise in molecular and cell biology, including virology, is preferred for both positions, as is collaborative team experience.

Searle, a wholly-owned subsidiary of Monsanto Company, offers competitive salary and benefits plans. Qualified applicants should send resumes to: **M. McCarthy; SEARLE; 700 Chesterfield Village Parkway; St. Louis, MO 63198.** An Equal Opportunity Employer.

SEARLE

Post-Doctoral Opportunity

Signal Transduction

The Central Research Division of Pfizer Inc offers a unique post-doctoral program comprising a 3 year appointment that includes 18 months in our laboratories followed by 18 months in an academic laboratory. The current position requires a scientist with a PhD in Biochemistry or related area and an interest in the regulation of phosphorylation in cells of hematopoietic origin. The first half of the study will focus on the regulation of phosphorylation in intact cells while the second half will involve expression and genetic manipulation of protein kinases and the proteins which regulate them. Publication of the results of these studies will be expected.

This position includes a stipend, medical and dental insurance, and relocation assistance. To be considered for this position, please forward your *curriculum vitae* and the names of three references to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Central Research Division, Pfizer Inc, Eastern Point Road, Groton, Connecticut 06340. An equal opportunity employer.



Central Research
Bringing science to life.

RESEARCH SCIENTISTS

Natural Product Sciences, Inc. is a rapidly growing company developing novel pharmaceutical and agrochemical products based on natural product leads. With a strong in-house research program comprising chemistry, biology, and molecular biology and major industrial partners in both pharmaceuticals and agrochemicals, Natural Product Sciences is a leader in the natural products field.

As part of the continuing expansion of its research efforts, NPS now has openings for highly motivated **Molecular Biologists** with demonstrated skills in recombinant expression. Hands-on experience in molecular virology, baculovirus expression, expression in mammalian cells, or construction and screening of expression libraries is particularly desirable. Applicants at all levels will be considered for Associate or Senior Scientist positions.

Natural Product Sciences offers competitive salaries, benefits and the opportunity for equity ownership. Our location on the western slope of the Rocky Mountains provides an unusually beautiful and livable environment in which to pursue innovative and important science.

Please send curriculum vitae and names and addresses of three references to: **Director of Personnel, Natural Product Sciences, Inc., 420 Chipeta Way, Salt Lake City, UT 84108.** Natural Product Sciences is an equal opportunity employer.



NATURAL PRODUCT SCIENCES, INC.

ROCKEFELLER FOUNDATION

BIOTECHNOLOGY CAREER FELLOWSHIPS

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, reproductive biology, and environmental protection.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to **Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.**

Schering

Microbiologists

**Take action
developing important
new biotransformation processes.**

Now's the time to make a significant contribution at Schering-Plough. We're a \$3+ billion leader in the health care industry whose ongoing research and development results in significant new processes and products. Right now, our Microbiological Development Group can offer you considerable challenge in the design and development of biotransformation processes.

The following roles will impact on the production of chiral pharmaceuticals and microbial fermentations for the production of antimicrobial agents:

Senior Scientist

You will play a critical role in establishing a research program to identify novel microbial activities for use in developing efficient bioconversion processes.

Requires a PhD in Microbiology/Biochemistry with 1-3 years postdoctoral or industrial experience in microbial/enzymatic biotransformations. You must be proficient in microbial chemistry and possess strong communication skills. Prior supervisory experience or a background in molecular biology would be highly desirable.

Assistant/Associate Scientist

You will conduct research to support microbial fermentation development.

Requires a BS or MS in Microbiology with 2-4 years' academic or industrial experience in microbial fermentation development. Must be familiar with biochemical procedures necessary to isolate and characterize enzymes, and be proficient in maintaining and culturing a variety of microorganisms. Experience with HPLC or molecular biology techniques would be helpful.

We offer a competitive starting salary, comprehensive benefits and outstanding growth potential. For prompt, confidential consideration, send your resume with clear indication of position desired, to: Mr. M. Urdanick, Schering-Plough Corporation, 1011 Morris Avenue, Union, NJ 07083. We are an equal opportunity employer.

What you have in mind, we put into action.



Schering-Plough

Postdoctoral Positions for Chemists, Biologists, Microbiologists

The National Institute of Dental Research (NIDR), National Institutes of Health, invites applicants with a D.M.D., D.D.S., M.D., Ph.D. or D.V.M. to apply for postdoctoral positions in chemistry, biology, and microbiology. Areas of investigation include:

- connective tissue and matrix development
- tumor biology and metastasis
- AIDS research
- bone and tooth biology
- signal transduction and secretion
- pain pathways and mediators
- autoimmunity
- oral microbial interactions
- vaccine development
- allergic and chronic inflammatory mechanisms

Fellowships offer research training in the laboratories of NIDR intramural scientists. Stipend commensurate with experience. Send curriculum vitae, bibliography, and three letters of reference to:

Personnel Officer
National Institute of Dental Research
National Institutes of Health
Building 31, Room 2C-23
9000 Rockville Pike
Bethesda, MD 20892



Applications will be accepted until May 31, 1991.
NIH is an Equal Opportunity Employer

R & D Scientists Cancer Therapeutics

CANJI, INC., a goal driven bio-pharmaceutical company in the San Diego area, is engaged in the development of innovative cancer therapeutics based on tumor suppressor gene technology. We have challenging opportunities available in the following positions for hardworking, motivated scientists interested in joining our team effort to bring targeted products into the market place.

MOLECULAR BIOLOGIST—PhD in Molecular Biology with 2+ years of postdoctoral experience in mammalian expression and gene transfer vectors. Experience in tumor biology is preferred.

ANALYTICAL CHEMIST—PhD in Analytical Chemistry, Biochemistry, or Immunochemistry with industrial quality control experience.

PHARMACOLOGIST—PhD in Pharmacology or Physiology with 3+ years of postdoctoral experience. The successful candidate will be responsible for implementing pharmacokinetics, toxicology, and efficacy studies in animals.

IMMUNOCHEMIST—PhD in Immunochemistry with industrial experience in developing immunological diagnostic products.

PROTEIN PROCESS ENGINEER—Industrial experience in protein purification and large scale column chromatography. Familiarity and experience in GLP and GMP is highly desirable.

Canji offers successful candidates competitive compensation and benefits. Please send curriculum vitae and name and address of three references to: **Personnel, CANJI, INC., 44077 N. Torrey Pines Road, La Jolla, CA 92037.** An Equal Opportunity Employer.

CANJI

Cellular Neurobiology and Development of the Leech



August 4 - 24, 1991

For ten graduate students, postdoctoral students, and independent investigators interested in applying and integrating diverse experimental approaches to the study of the nervous system and development of a single organism.

Electrophysiological and morphological methods (including monoclonal antibodies) will be used to study neurons of the leech segmental ganglia. Electrophysiological results are correlated both with behavior and with the morphology of individual cells marked by intracellular staining. Patch-clamp techniques are used to study whole cell and single channel transmembrane currents in isolated neurons in culture.

Students will also learn techniques and concepts of experimental embryology, including cell lineage tracing, cell ablation, and the analysis of gene expression using non-radioactive *in situ* hybridization and immunohistochemistry.

Director: David Weisblat, University of California, Berkeley. Faculty: Pierre Drapeau, McGill University; Shawn Lockery, Salk Institute; and others to be announced.

■ Application deadline: **MAY 15, 1991**

Partial financial aid is available to qualified applicants.

For further information and application forms, contact:
Florence Dwane, Admissions Coordinator,
Marine Biological Laboratory, Woods Hole, MA 02543, USA
(508) 548-3705, ext. 216.

Marine Biological Laboratory

International Symposium on Newer Aspects of the Adjuvant Action of Lipid A and Its Analogs

Airlie Conference Center, Airlie, Virginia
April 6-9, 1991

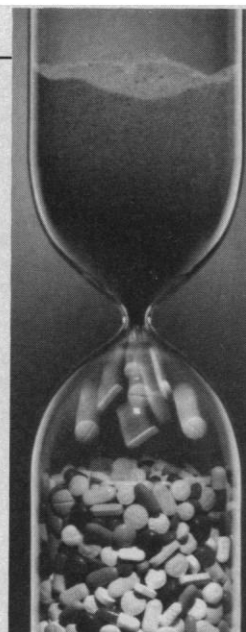
An international symposium on the multiple adjuvant functions of lipid A and its analogs is being held to bring together investigators in diverse disciplines to provide a state of the art overview and detailed analysis of current areas of activity. The topics to be covered include: New advances in the structural relationships of lipid A and its analogs; Implications and Consequences of lipid A administration; Cellular mechanisms and cytokines; Non-specific increases in resistance to microorganisms; Molecular mechanisms of intracellular signaling; and Current vaccine strategies using lipid A derivatives.

Lecturers and Invited Participants will include:

Carl Alving	Douglas Golenbock	Alois Nowotny
Mark Astiz	Gary Gustafson	Richard Proctor
Phillip Baker	Akira Hasegawa	Christian Raetz
David Beatty	Robert Hunter	Ernst Rietschel
Alan Croes	Arthur Johnson	Tony Rudbach
Barbara Detrick	Wayne Koff	Peter Stutz
Sarvamangala Devi	David Morrison	Kuni Takayama
Thomas Fitzgerald	Robert Munford	Terry Ulrich
Hans-Dieter Flad	Masayasu Nakano	Stefanie Vogel
Chris Galanos	Robert North	

For registration information, write to: Dr. Arthur Johnson, Univ. of Minnesota, Dept. Medical Microbiol. & Immunology, 10 University Drive, Duluth, MN 55812. Registration cost is \$100 (before March 1, 1991), \$150 (after March 1).

A TIME FOR ACHIEVEMENT



The opening of Glaxo Inc.'s \$350 million Girolami Research Center in Research Triangle Park, NC represents a monumental commitment in the pharmaceutical industry to the discovery of drugs for unmet patient needs. Scientists engaged in Glaxo's expanding research and development programs at the Center have a premier facility in which to work. The following opportunity is now available:

CELL and MOLECULAR BIOLOGIST

Cancer Gene Targets Group

We seek a Molecular Biologist with experience in cell biology for our Cancer Gene Targets Group, which has been recently established as part of our expanding Research and Development program. This individual will lead a new research team focusing on the molecular and cellular biology of cancer. Emphasis will be on an interdisciplinary approach to the regulation of cancer gene expression, both at the DNA and RNA levels.

The team will test novel chemical approaches for the regulation of gene expression, including antisense and triplex forming oligonucleotides. Initially the work will involve development of *in vitro* systems which can be translated to *in vivo* for the study of alterations in important genes and loss of suppressor control.

The successful candidate will have had experience in the application of molecular biology to biochemistry or cell biology, and will also be an innovative, pragmatic scientist capable of turning ideas into action. Active collaboration between the research team and other teams both inside and outside the company is required.

Qualifications must include a Ph.D. or M.D., a minimum of five years of relevant post-doctoral experience, and a proven record of achievement.

Our Research Triangle Park, NC location (near Raleigh, Durham and Chapel Hill) offers a lot more for people who seek a well-rounded lifestyle. This world-famous scientific, industrial, and academic community affords access to respected universities, beautiful residential areas, major retail centers, excellent health care and abundant cultural and recreational facilities. Join Glaxo and enjoy an excellent salary, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork and outstanding opportunities for career satisfaction.

Send your resume, including salary history, to: Human Resources Department, Job #9125B111-SC, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709. (No Phone Calls or Agency Referrals, Please) An Equal Opportunity Employer M/F/H/V.

Glaxo Inc.

RESEARCH POSITIONS

MedImmune, Inc. is committed to the discovery and application of novel molecular and immunologic approaches toward the development of vaccines and therapeutic agents for human infectious diseases. We currently have two openings in both our Molecular Genetics and Biochemical Virology Departments.

MAMMALIAN CELL EXPRESSION, Scientist level - The individual should have a MS or PhD degree and at least three years experience in gene expression in mammalian cells. Experience in expression of recombinant immunoglobulin genes is especially relevant.

MOLECULAR BIOLOGY, Research Associate level - The individual should have a BS or MS degree and laboratory experience in several of the following areas: RNA and DNA purification, cDNA cloning, DNA sequencing, and gene assembly and expression.

BIOCHEMISTRY, Scientist level - The individual should have a MS or PhD degree and several years of research experience in protein purification and analysis, enzymology, and biochemical virology.

VIROLOGY, Scientist level - The individual should have a MS or PhD degree and several years of laboratory experience and expertise in mammalian cell culture, virus propagation, virus plaque assay, virus purification, antiviral antibody reactivity and neutralization.

We are an equal opportunity employer and offer competitive salaries, an excellent benefits package, and a unique opportunity for professional growth. Applicants should submit their resume for prompt, confidential consideration to:



MedImmune, Inc.
Human Resources
19 Firstfield Road
Gaithersburg, MD 20878

Bioanalytical Chemist

Pharmaceutical R&D



**Take charge
of your
career where
ability counts**

Hoechst-Roussel Pharmaceuticals Inc., a fast-growing subsidiary of Fortune 100 Hoechst Celanese, has an opening in its Chemical Research Department.

The successful candidate will be responsible for the development and validation of bioanalytical assays of drugs and drug metabolites. You will also provide collaborative interface with drug metabolism scientists, synthetic chemists and clinical investigators. This position requires a Ph.D. degree in Analytical/Bioanalytical Chemistry with 1-3 years of pharmaceutical experience in the isolation, characterization and quantitation of drugs and drug metabolites from biological matrices. Knowledge of computer data handling systems would be desirable.

Located at our modern research facility in Bridgewater, NJ, this position offers a competitive salary and a comprehensive, flexible benefits program. Please submit resume with salary history to: Joe Thomas, Mgr. Human Resources, Section 36-18, Hoechst-Roussel Pharmaceuticals Inc., Route 202 & 206, Somerville, NJ 08876-1258. An Affirmative Action Employer M/F/H/V.

Hoechst-Roussel Pharmaceuticals Inc.

Hoechst 

The Hoechst name and logo are registered trademarks of Hoechst AG.

A rapidly growing provider of diversified healthcare products. A new leader in the biotechnology industry. An innovative marketing and business force. With 650 employees worldwide and an impressive array of products, Genzyme is all of these. Now is the time for talented individuals to build their careers with Genzyme.

Associate Director, Cell Biology

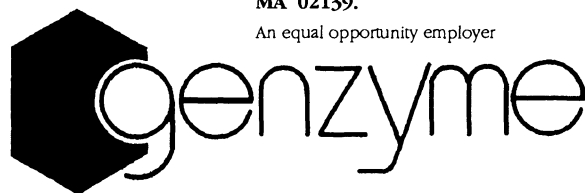
We seek a strong innovative scientist to lead our Cell Biology group. This position directs the activities of three scientists conducting applied and basic research on intracellular protein trafficking, cell surface receptors and the mechanisms of cell-cell interactions.

The ideal candidate will have a Ph.D. in Cell Biology and 7-10 years' practical experience studying the biology of cellular interactions plus prior management experience.

Genzyme rewards success with an excellent compensation and benefits package, including 3 weeks' vacation, a 401(k) plan with a company match, extensive insurance benefits, equity participation, and new state-of-the-art facilities.

For immediate consideration send your resume to Human Resources, Dept. S301, Genzyme Corporation, One Kendall Square, Cambridge, MA 02139.

An equal opportunity employer



Success Through Science

Research Fellow/Assistant Investigator

Lindsley F. Kimball Research Institute, internationally recognized research facility, has an immediate need for a **Biochemist with a strong background in Molecular Biology**.

Participate in a project involving identification and characterization of plasma protein genes in human cell lines. Must be proficient in modern techniques. Lab is located close to other major research institutes.

We offer excellent salary and an outstanding benefit package including liberal vacation, 100% tuition reimbursement, medical/dental and pension plan.

If you meet the qualifications above, submit resume, with salary history/requirements, to: **LFK Research Institute of the New York Blood Center, Dr. Gerd Grieninger, 310 East 67th Street, New York, NY 10021; or FAX resume to: 212-737-4506.** Equal opportunity employer M/F/H/V.

 **Lindsley F. Kimball**

Research Institute

A Division of the New York Blood Center

Where concern for the community comes first

Request for Applications for Laboratory Analysis

The Health Effects Institute—Asbestos Research is an independent non-profit corporation formed recently to support research to determine the airborne exposure levels prevalent in buildings, to characterize peak exposures and their significance, and to evaluate the effectiveness of asbestos management and abatement strategies in a scientifically meaningful manner. HEI-AR is organized to gather and to generate reliable information, and is supported jointly by the Environmental Protection Agency and a broad range of private parties that have an interest in asbestos. The Congressional mandate under which HEI-AR now operates specifies that the HEI-AR's research "effort shall in no way be construed to limit or alter EPA's authority or obligation to proceed with rulemakings and to issue rules as necessary."

The HEI-AR has recently issued two Requests for Applications: RFA 90-1 *Effect of Maintenance and Custodial Activities on Asbestos Exposure to Building Occupants*; and RFA 90-2 *Population Exposure to Asbestos*.

HEI-AR anticipates that air sampling and analysis using the transmission electron microscope to measure airborne levels of asbestos will be a strong component of the studies it funds. In order to obviate the difficulties that may be related to interlaboratory differences in sample handling, preparation or analysis, HEI-AR plans to issue a separate contract with an experienced laboratory for TEM analysis of the air samples generated during the course of studies funded under these RFAs. HEI-AR will also establish a strong QA/QC program, which is likely to include one or more additional laboratories for comparative analyses.

HEI-AR is soliciting applications from qualified laboratories to serve as the primary TEM analysis laboratory (Reference Laboratory). Materials describing the Health Effects Institute—Asbestos Research, preparation of applications, and applications will be available after **March 8, 1991**. The deadline for the Reference Laboratory application is **April 22, 1991**. Work on the studies funded under the RFAs is expected to begin in the summer, but it is anticipated that samples for analysis will not be collected until the fall.

Requests and inquiries should be directed to:

Dr. Rashid Shaikh
The Health Effects Institute—Asbestos Research
141 Portland Street, Suite 7100
Cambridge, MA 02139

HEI·AR

The Health Effects Institute—
Asbestos Research

Bristol-Myers Squibb Pharmaceutical Research Institute

Bristol-Myers Squibb Pharmaceutical Research Institute is continuing to expand our extensive research efforts in the areas of cardiovascular, infectious and metabolic diseases. This expansion has created several exceptional opportunities for individuals to do basic research in the following areas:

RESEARCH SCIENTISTS, BS/MS

MOLECULAR BIOLOGY

The focus of this position will be on cloning and expressing mammalian genes in cultured cells. Demonstrated skills in cloning, sequencing, vector construction, transfection of mammalian cells and maintenance of tissue culture cell lines is preferred. Reply to **Dept. # 202A**.

VIROLOGY

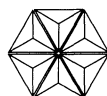
Position available for a biochemist or protein chemist to examine protein-protein and protein-DNA interactions. Experience in protein purification, peptide isolation, electrophoresis, HPLC and FPLC is preferred. Reply to **Dept. # 202B**.

METABOLIC DISEASE

- Participate in research related to the discovery of novel therapeutic agents to combat atherosclerosis via application of molecular techniques. There will be opportunities to participate in studies of the basic molecular processes in atherogenesis. Experience in DNA cloning/sequencing and PCR technology required. A background in site directed mutagenesis, mRNA isolation/analysis or cell culture would be desirable. Reply to **Dept. # 202C**.
- Participate in the development and implementation of novel molecular based assays for the discovery of agents to combat atherosclerosis. Experience with molecular biology, cell culture and/or ELISA would be an asset. Reply to **Dept. # 202D**.

Candidates for these positions should possess a BS or MS in a relevant scientific discipline along with relevant research experience.

Please forward your resume to (including dept. code#): **Bristol-Myers Squibb Pharmaceutical Research Institute, Human Resources Department, P.O. Box 4000, Princeton, NJ 08543-4000**. An equal opportunity employer.



Bristol-Myers Squibb Company

POSITIONS OPEN

POSTDOCTORAL FELLOW. Position available to study alterations in signal transduction mechanisms in different models of genetic hypertension. Preference will be given to candidates with a recent Ph.D. in molecular/cell biology with experience in molecular biology techniques, ligand binding, and phospholipase assays. Send application, curriculum vitae, and names and addresses of two references to: **Janice G. Douglas, M.D., Director, Division of Endocrinology and Hypertension, Case Western Reserve University School of Medicine, 2040 Adelbert Road, Cleveland, OH 44106. Telephone: 216-368-4744. FAX: 216-368-4752. Case Western Reserve University is an Equal Opportunity Employer.**

BIOLOGY

POSTDOCTORAL TEACHING FELLOWSHIP

The College of Basic Sciences, Louisiana State University (LSU), anticipates a postdoctoral teaching fellowship to begin by 21 August 1991. This is a teaching fellowship supported by a Hughes Foundation grant for persons intending to pursue a career in college life science teaching. Duties include laboratory coordination and supervision of student workers and teaching assistants in major and nonmajor introductory laboratories as well as one lecture section in introductory biology. The successful applicant will also have administrative responsibilities associated with the Hughes initiative at LSU.

A Ph.D. in any field of biology is required. Applications including curriculum vitae, three letters of reference, and a written statement of educational objectives should be addressed to: **Dr. Marshall D. Sundberg, 30 Agricultural Administration, Louisiana State University, Baton Rouge, LA 70803.**

Application deadline is 15 March 1991. *LSU is an Equal Opportunity Employer.*

RESEARCH INSTRUCTOR AND POSTDOCTORAL FELLOWS. Available immediately for well-funded new initiative to study cell growth regulations and signal transduction. Laboratory is located in pleasant Georgetown environment; considerable interaction with nearby NIH. *Applications from minorities are encouraged. Salaries will be commensurate with experience.* Contact: **Dr. Aleyda V. Kasten, Department of Biochemistry and Molecular Biology, Georgetown University School of Medicine, Washington, DC 20007. Georgetown is an Equal Opportunity/Affirmative Action Employer.**

GRADUATE RESEARCH ASSISTANTSHIP (M.S./Ph.D.)/POSTDOCTORAL FELLOW. The Department of Entomology, Louisiana State University, needs students/fellows interested in social insect biology, ecology, and behavior (termites). Our goal is to develop innovative control strategies. Unique research sites include cypress swamps in Lake Charles area and historical sites in the French Quarter of New Orleans. Write: **Dr. Gregg Henderson, Department of Entomology, Louisiana State University, Baton Rouge, LA 70803. Louisiana State University and the Louisiana Agricultural Experiment Station are Equal Opportunity/Affirmative Action Employers.**

POSTDOCTORAL/RESEARCH ASSOCIATE. Ph.D. synthetic organic chemist to work on development of new radiopharmaceuticals for diagnostic imaging [*J. Med. Chem.* **33**, 171 (1990)]. Background in synthesis and characterization of small organic molecules is essential. The position provides interdisciplinary interaction with the Departments of Psychiatry and Pharmacology. Send résumé to: **Hank F. Kung, Ph.D., Department of Radiology, 3700 Market Street, Room 305, Philadelphia, PA 19104. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE. For research hospital in northwestern Ohio. Design, perform, and explain experiments utilizing analytic chemistry, protein chemistry, protein isolation and purification enzyme assay, cell isolation and culture, and membrane isolation investigating the toxicological effects on animal models of various substances and correlation and comparison of experiment results to human application. M.D. (medicine) or Ph.D. (pharmacology) and 2 years of experience in the job described. Forty hours per week, 8:30 a.m. to 5:30 p.m., Monday to Friday; \$25,800 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **J. Davies, JO #1153402, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE, internal medicine. Medical school position involving research to develop vaccine for breast tumor, specifically focusing on the tumor antigen, mucin, using recombinant DNA techniques. Requires Ph.D. in a basic science plus 2 years of additional research experience involving recombinant DNA techniques. Annual salary: \$21,768. Apply at the Texas Employment Commission, Lubbock, Texas, or send résumé to: **Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #6122751. Ad paid by an Equal Employment Opportunity Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

Two positions available immediately to study the molecular mechanisms of Platelet-Derived Growth Factor Signal Transduction. Studies will focus on the role of PDGF-receptor dimerization in alterations of cytosolic ion status and the role of these alterations in the control and regulation of cell proliferation using state-of-the-art digital and confocal imaging techniques. Ph.D. with background in cell biology, biochemistry, or molecular biology preferred. Cell culture and microinjection experience highly desirable. Salary will be commensurate with experience. Send curriculum vitae and the names of three references to: **Dr. Brian Herman, Associate Professor, Department of Cell Biology and Anatomy, University of North Carolina at Chapel Hill, CB# 7090, 232 Taylor Hall, Chapel Hill, NC 27599.**

An Affirmative Action/Equal Opportunity Employer, M/F/H/V.

RESEARCH ASSOCIATE/POSTDOCTORAL

A position is currently available to study genotoxic stress responses in mammalian cell. Emphasis will be given to a recently isolated group of novel DNA-damage-inducible genes that play a role(s) in negative growth control. Studies will also focus on the regulation of HIV-1 expression by genotoxic stress and on HIV-1 regulatory features shared with cellular stress-response genes. Experience in molecular biology and/or protein biochemistry, such as the purification and characterization of DNA-binding proteins, is desirable. Salary for a postdoctoral fellow (more than 3 years of experience) or a research associate (up to 5 years of postdoctoral experience) is commensurate with experience. Send curriculum vitae and names of three references to: **Dr. A. J. Fornace, Laboratory of Molecular Pharmacology, Building 37, Room 5C09, National Institutes of Health, Bethesda, MD 20892. email: fornace@fcrlv1.ncifcrf.gov.**

An Equal Opportunity/Affirmative Action Employer.

VERTEBRATE BIOLOGIST/RESEARCH ASSOCIATE

The Center for Water and the Environment of the Natural Resources Research Institute is looking for a general vertebrate biologist to join a core group of researchers to study the effects of natural resources development on ecological systems. The successful applicant should have broad training in vertebrate biology, ecology, statistics, and especially ornithology.

Minimum qualifications for the position include at least a Ph.D. in ecology, biology, or closely related field, five peer-reviewed publications, formal training and experience in the use of statistics including multivariate statistics, the ability to identify Minnesota's forest birds by sight and sound, and the physical ability to work in a variety of field environments. Desired qualifications include a minimum of 2 years of postdoctoral experience in a relevant field, ten or more peer-reviewed publications, supervisory experience, and a demonstrated record in the development of externally funded projects.

The position will be a fixed term appointment of up to 3 years under the University of Minnesota's Professional and Academic Staff. Salary is negotiable. The position is expected to begin around 1 July 1991.

To apply, send an application letter, résumé, and the names, addresses, and telephone numbers of three references to: **Vertebrate Biologist Search Committee, Natural Resources Research Institute, 5013 Miller Trunk Highway, Duluth, MN 55811. Applications must be postmarked by 15 March 1991.**

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation.

POSITIONS OPEN

Baxter Diagnostics, Inc., MicroScan Division, develops and manufactures sophisticated computer controlled electronic instrumentation and disposables used in the clinical microbiology laboratory.

We have **IMMEDIATE OPENINGS** for individuals to work in our research and development section. The individuals we seek will possess Ph.D.'s in bacteriology or microbiology with a molecular emphasis. At least 2 years of postdoctoral experience is needed. In addition, some experience in probe identification and characterization, hybridization techniques, and target amplification is preferred.

Baxter Diagnostics, Inc., MicroScan Division, is a leader in the healthcare industry and offers excellent salaries and benefits. If your experience and expertise fall within our requirements, please submit your résumé and salary history to: **Human Resources Department 1A, Baxter Diagnostics, Inc., MicroScan Division, 1584 Enterprise Boulevard, West Sacramento, CA 95691. We are an Equal Opportunity Employer, M/F/H/V.**

BIOCHEMIST, PHARMACOLOGIST, OR CHEMIST. Two positions available immediately. Ph.D., 0 to 2 years of experience. Strong interest in nucleoside chemistry, biochemistry, and/or enzymology. Antiviral and anticancer research. *U.S. citizen.* Send résumé and interests by 1 April 1991 to: **Dr. Raymond Schinazi, Emory University, VAMC-151, 1670 Clairmont Road, Decatur, GA 30033. Affirmative Action/Equal Opportunity Employer.**

AQUATIC BIOLOGIST/BIOCHEMIST. Aquasearch, Inc., a research and development firm specializing in aquatic biotechnology, is seeking a highly motivated individual with experience in the fields of microalgal mass culture, physiology, and/or biochemistry. The successful applicant will be involved in ongoing projects in microalgal mass culture. Supervisory skills will also be helpful. An M.S. or Ph.D. in an appropriate field is required. Individuals with skills in HPLC, microalgal culture techniques, and computers are preferred. Salary will be commensurate with experience. Interested individuals should send a résumé and the names, addresses, and telephone numbers of three references to: **Mr. M. Granger, Aquasearch, Inc., 11828 Rancho Bernardo Road, Suite 123-180, San Diego, CA 92128. Affirmative Action/Equal Opportunity Employer.**

The Southeastern Forest Experiment Station (SE-FES), U.S. Department of Agriculture (USDA) Forest Service, is recruiting for two positions: (i) **RESEARCH PLANT ECOLOGIST OR BOTANIST** position offered at Clemson University, Clemson, South Carolina, will be responsible for planning and performing independent research to assess responses of plant ecosystems to changes associated with timber harvesting and other practices. Special emphasis will be given to development, implementation, and evaluation of management strategies to conserve listed, candidate and sensitive plant species within a multiple-use framework. Starting salary for this position will range from \$37,294 to \$44,348 depending upon qualifications of selected applicant. (ii) **RESEARCH FISHERIES BIOLOGIST** position offered at Virginia Polytechnic Institute in Blacksburg, Virginia, will be responsible for planning and performing independent research to assess the responses of cold-water fish to changes in habitat resulting from forest management, road construction, and other human-caused disturbances. Salary range for this position is \$44,348 to \$57,650 depending upon qualifications of selected applicant.

Qualified individuals should send a one-page résumé to: **Nathan Presley, Early Alert Notice 91-39, SEFES, P.O. Box 2680, Asheville, NC 28802. Telephone: 704-257-4380. Applications will be accepted through 15 March 1991.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available for recent Ph.D. to study the mutation, function, and regulation of thymidylate synthase in human cancer cells, to determine events that influence programmed cell death, and the influence of interferons in these processes. Techniques include molecular biology, gene sequencing, protein purification, enzyme kinetics, HPLC, and cell culture. A strong background in molecular biology, biochemistry, or molecular pharmacology is required. Send curriculum vitae and three letters of reference to: **Dr. J. A. Houghton, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Affirmative Action/Equal Opportunity Employer.**

SANDOZ AGRO LTD. wishes to recruit

ENVIRONMENTAL SCIENTISTS

to work with SANDOZ CROP PROTECTION CORP., its subsidiary in Des Plaines, Chicago, USA.

Responsibilities

Key responsibilities will include conducting pesticide residue studies in accordance with EPA guidelines, developing and validating new determination methods for various environmental media, drawing up study protocols and writing final reports. Successful candidates will also be expected to provide technical support and expertise to the Environmental Sciences Department as required.

Requirements

Candidates must have a Ph.D in chemistry or a related discipline, plus one to two years' experience of environmental pesticide residue analysis together with a working knowledge of plant and animal metabolism, pesticide residues and radioisotope and related laboratory methods.

Remuneration and other benefits will be to the standard normally associated with a multinational corporation. An excellent working environment is guaranteed and the Company's international dimensions offer suitable candidates interesting career development opportunities.

Applications should be made in writing to:

Sandoz Agro Ltd.
Personnel Department
Reference 1806
P.O. Box
CH-4002 Basle
Switzerland



SANDOZ

DRIVEN BY RESEARCH, *backed by Johnson & Johnson,* POWERED BY INNOVATION.



The track record of original research and discoveries by the scientists at the Janssen Research Foundation is impressive by any standard. Our efforts have resulted in more than 82,000 original molecules and an array of new pharmaceutical products that include IMODIUM®, NIZORAL®, SUFENTA®, HISMANAL®, ALFENTA® and ERGAMISOL®. Many more are in the pipeline, and it's that penchant for innovation that has created an outstanding opportunity for **Clinical Research Associates**.

Working in small teams, you'll be involved in ongoing drug studies. Current areas of interest include anesthesiology, gastroenterology, psychotherapy, mycology, parasitology, cardiology, oncology, allergy and immunology. And **Medical Writers, Biostatisticians, and professionals in Regulatory Affairs and Professional Services** will find exciting opportunities at the Janssen Research Foundation as well.

For the clinical professional, few organizations can match the advantages at the Janssen Research Foundation. Research and development is the mainstay of all we do, and as a member of the Johnson & Johnson Family of Companies, we offer a progressive environment, opportunities for advancement, competitive salary and superlative benefits, including our on-site wellness center.

We are planning to move to our state-of-the-art facilities currently under construction in scenic Washington Crossing, NJ in early 1992. If you'd like to bring your innovative ideas to an organization that will appreciate them, send your resume with salary history in confidence to: the Janssen Research Foundation, Employment Office Box S391, 40 Kingsbridge Road, Piscataway, NJ 08855-3998. An Equal Opportunity/Affirmative Action Employer M/F/H/V.

**JANSSEN
RESEARCH
FOUNDATION**

"Where Research Is The Driving Force"

A *Johnson & Johnson* Company

POSITIONS OPEN

MOLECULAR BIOLOGIST

We are looking for a research scientist in the field of molecular biology of rheumatoid arthritis (RA) disease [Takeuchi, F. *et al.*, *J. Immunogenet.* 16, 475 (1989); Ichikawa, S. and A. Kaji, *J. Biol. Chem.* 264, 20054 (1989)].

The candidate must have had experience of recombinant DNA techniques and knowledge of immunology, with either a master's degree plus research experience or a Ph.D. degree. The research to be undertaken will be the genomic library construction and its cloning of RA related proteins.

Candidate will conduct research at either of the following: Department of Internal Medicine and Physical Therapy, University of Tokyo, or Department of Microbiology, School of Medicine, University of Pennsylvania. The salary is in the range of \$25,000 to \$30,000 according to experience.

For informal inquiries, please contact one of the following: Dr. Fujio Takeuchi or Dr. Kunio Matsuta, Department of Internal Medicine and Physical Therapy, University of Tokyo, Hongo, Bunkyo-ku, Tokyo, Japan, telephone: 03-3815-5411 (ext. 8331), or Dr. Akira Kaji, Department of Microbiology, School of Medicine, University of Pennsylvania, 209 Johnson Pavilion, Philadelphia, PA 19104-6076, telephone: 215-898-8288.

SENIOR RESEARCH ASSOCIATE/BIostatistician

You will provide statistical analysis of data from our clinical centers. In addition, you'll generate timely reports for FDA/NIH submissions as well as handle graphical presentations for medical and scientific journals.

To qualify, you must have an M.S. in biostatistics plus a B.S. in biology or chemistry, or equivalent. Three years of data analysis experience in the medical device and drug industries is also required. You must additionally have knowledge of PC software. Familiarity with cardiovascular and cardiac medical research preferred.

At Novacor, you will find the salaries attractive and the benefits employee-oriented. Our superb waterfront location in the Oakland Airport Business Park is just part of our outstanding environment. Send résumé to: Marian Sticht, Director, Personnel, 7799 Pardee Lane, Oakland, CA 94621. Telephone: 415-568-8338. *Equal Opportunity Employer.*

NOVACOR

RESEARCH ASSOCIATE

Unique and challenging opportunity for an innovative young molecular biologist is available immediately to develop staining protocols for automated, quantitative, multiparameter fluorescence image cytometry of cervical smears and breast biopsies and fine needle aspirate specimens. Ph.D. and previous experience in molecular biology or a related field is required. The applicant should ideally have experience in antibody labeling, in situ hybridization, fluorescent labels, PCR, autoradiography, Western and Southern blotting, and tissue culture. Salary will be commensurate with experience. Please send a detailed curriculum vitae, description of research interests, and three letters of recommendations to: Dr. Brian Herman, Associate Professor, Department of Cell Biology and Anatomy, University of North Carolina at Chapel Hill, CB# 7090, 232 Taylor Hall, Chapel Hill, NC 27599.

An Affirmative Action/Equal Opportunity Employer, M/F/H/V.

BONUS CIRCULATION FOR YOUR CLASSIFIED AD AT FASEB/ASBMB MEETING

Our issue of 5 April 1991 will be distributed to scientists attending the 1991 FASEB/ASBMB Meeting in Atlanta, Georgia.

Deadline for submission of line classified ads:
21 March 1991

SCIENCE

Classified Advertising
Telephone: 202-326-6555
FAX: 202-682-0816

POSITIONS OPEN



Agricultural Research Service
United States Department of Agriculture

The Tobacco and Forage Research Unit, Agricultural Research Service, U.S. Department of Agriculture, in Lexington, Kentucky, is accepting applications for the following position: **RESEARCH GENETICIST (PLANTS)**, GS-440-11/12. Assignment presents an opportunity to conduct research on the development of improved genetic populations and breeding lines of *Festuca arundinacea* (tall fescue). Research will utilize wide hybridization of tall fescue with species of *Lolium* and *Festuca*. Must be a U.S. citizen. Salary: \$31,116 to \$48,481 per annum based on qualifications and experience. B.S./M.S./Ph.D. or equivalent experience. Knowledge of plant breeding and statistical genetics is required. Usual federal government benefits apply. For further information, contact: Dr. Steven Crafts-Brandner, 606-257-4770. For application packet, call: Mrs. Darlene Fowler, 301-344-3377, U.S. Department of Agriculture, Greenbelt, Maryland. Refer to ARS-D18-044 when inquiring about vacancy. Completed applications must be received by 29 April 1991. *USDA is an Affirmative Action/Equal Opportunity Employer.*

California Institute of Technology (Caltech) is seeking an **ASSOCIATE BIOLOGIST** to conduct an independent research program on the evolution and molecular biology of RNA plant and animal viruses.

Candidate must have Ph.D. in biology with 3 years of postdoctoral experience in molecular virology, including in vitro translation systems and both animal and plant viruses. Candidates must have demonstrated ability and knowledge in the cloning of viral RNAs, including production of very long cDNA clones, in sequencing and analysis of RNAs and cDNAs, and in site-specific mutagenesis as evidenced by refereed publications.

Salary is \$35,000 per annum. *Caltech is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Please send curriculum vitae to: Mike Miranda, Administrator, Division of Biology, 156-29, California Institute of Technology, Pasadena, CA 91125.

RESEARCH ASSOCIATE IN SYNTHETIC ORGANIC CHEMISTRY. To carry out the design, synthesis, and characterization of novel heterocyclic compounds to act as tumor-specific hypoxic cytotoxins and radiosensitizers. The position is available immediately and requires a Ph.D. in synthetic organic chemistry. Related experience in anticancer research or medicinal chemistry would be desirable. Salary for research associate is \$30,000 per annum. Send résumé to: M.T., AA210, SRI International, 333 Ravenswood Avenue, Menlo Park, CA 94025. *An Equal Opportunity Employer.*

RESEARCH SCIENTIST

Cephalon, Inc., a neuroscience biotechnology company, has an opening for a scientist to work on neurotrophic factors. Ideal candidate would have a Ph.D. in molecular biology, biochemistry, or related field, with experience in eukaryotic protein expression systems, cDNA cloning, and protein purification. Applicants should send curriculum vitae by 15 March 1991 to: Dr. S. Meyer, Cephalon, Inc., 145 Brandywine Parkway, West Chester, PA 19380.

SENIOR RESEARCH CHEMIST. Devise and synthesize heterocyclic and organometallic compounds for interaction with DNA, DNA/protein structures, and bone matrix. Development of assays for biological activity and bioavailability. Prepare technical documents, research reports, and manuscripts. Assemble and present research reports. Computer-assisted drug design studies. Supervise and recruit chemists and laboratory personnel. Requires Ph.D. in organic synthesis including employing organometallic reagents (e.g., organotin and organocopper). One to two years of experience in postdoctoral research involving elucidation of reaction mechanisms of metal (especially osmium) catalyzed asymmetric oxidation processes. Strong background and proven experience in synthesis with heterocyclic compounds and process development. Experience in related computer software such as Macro-Model, Chamm, and Quanta with outstanding academic and publication background. Forty hours per week; \$4318 per month. Submit curriculum vitae to: Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, JO #4346258. *Must have legal authority to work permanently in the United States.*

POSITIONS OPEN

RESEARCH POSITIONS IN EXPERIMENTAL CARDIOVASCULAR PATHOLOGY. The Department of Pathology, University of Alabama at Birmingham (UAB), is seeking postdoctoral and faculty level scientists for basic research in cardiovascular disease mechanisms. Postdoctoral appointees will work within established funded research programs. Experience in cellular or molecular biology is desirable. Replies and curriculum vitae should be mailed to: Jay McDonald, M.D., Chairman, Department of Pathology, UAB Station, University of Alabama at Birmingham, Birmingham, AL 35294. *UAB is an Affirmative Action/Equal Opportunity Employer.*

SENIOR RESEARCH SCIENTIST. Worldwide supplier of immunology research products needs scientist with demonstrated contributions in immunochemistry/molecular biology. Expertise in immunoassay development, sample handling, and purifications required, plus minimum of 2 to 5 years of postdoctoral industrial experience (GMP/ISO 9000 systems preferred). Candidate should have ability and creativity to adapt technological innovations to many disciplines. Send résumé to: Human Resources Manager, Pierce, P.O. Box 117, Rockford, IL 61105.

RESEARCH SPECIALIST II. To participate in development of a laboratory model for human disseminated strongyloidiasis. Opportunity to increase knowledge of parasitology, developmental biology, gastroenterology, and mathematical modeling of parasite populations. Veterinary degree highly desirable; alternative, advanced degree in parasitology/microbiology or B.A./B.S. with 3 to 5 years of experience with appropriate laboratory techniques. Position ends 31 December 1992. Send statement of interest, résumé, salary requirements, and three references to: Dr. G. A. Schad, School of Veterinary Medicine, University of Pennsylvania, 3800 Spruce Street, Philadelphia, PA 19104. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH IMMUNOLOGIST. Program in Transplant Immunology is offering a position for a molecular/cellular immunologist with expertise in human immunogenetics and transplantation immunology. Candidate must have a Ph.D. degree with at least 3 years of postdoctoral employment and/or training in human immunogenetics and HLA system involving: serology or cellular immunology, T cell cloning, molecular genetics as related to histocompatibility, immunochemistry. Responsibilities will include: Studies on human tolerance induction, regulation of HLA expression, and immune monitoring of transplant recipients. Salary range: \$41,600 to \$52,400 depending on experience. Send curriculum vitae and reference to: Marvin R. Garovoy, M.D., University of California, San Francisco, 520 Health Sciences East, Third and Parnassus Avenues, San Francisco, CA 94143-0508.

RESEARCH ASSOCIATE. For university in northwestern Ohio. To conduct research on photodynamic therapy (PDT) of solid malignancies and assess its efficacy as an evolving modality for cancer treatment. In particular, this will involve experiments with continuous wave and pulse alexandrite laser: first, optimizing the parameters for alexandrite laser lithotripsy; second, determining the effects on biologic tissue of pulsed alexandrite laser in combination with exogenously administered chromophores. To treat animal tumors with photodynamic therapy, using different light sources (Ar⁺ dye lasers and YAG lasers). Must have Ph.D. or A.B.D. in medical science and academic program must have included one course each in: current topics in surgery; light and transmission electron microscopy; radiation biology; radiological physics; and electron microscopic diagnostic pathology. Must have 2 years of experience as research assistant. Must have ability (as evidenced by academic letters of reference and/or publications and/or employer testimonials) to use different kinds of lasers (including Argon dye, YAG, and alexandrite lasers); to use laboratory animals (including inducing tumors in them, performing microsurgery, and doing cell and tissue culture); and to apply photodynamic therapy on laboratory animals using lasers and photosensitizers. Experience may be before, during, or after required degree. Forty hours per week, 8 a.m. to 5 p.m., Monday to Friday; \$24,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé and course transcript in duplicate (no calls) to: J. Davies, JO# 1153395, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

OPPORTUNITIES IN RETINAL DEGENERATION RESEARCH



**Research Career Development Award
RP Foundation Fighting Blindness**

Clinician-researchers with an interest in hereditary retinal degenerations are few. In recognition of a national need, the RP Foundation Fighting Blindness proposes a far-reaching type of career development award for a limited number of clinician-researchers of superior dedication and talent. Flexible in detail and duration, this program emphasizes specialized and rigorous training both in research and in clinical ophthalmology to be arranged at select locations. The program will be tailored to the individual and will be appropriate for a future appointment as Director of a departmental section concerned with retinal degenerations. The Foundation will undertake salary and research support and, to the degree necessary, special travel, tuition and housing allowances. Since the objective of the program is to set in place highly qualified clinician-researchers for productive medical careers, the Foundation will look with special favor upon nominations proposed by established centers of excellence which will assure the candidate a position when training is completed. For candidates applying independently, if accepted, the Foundation will facilitate an appropriate future appointment. Candidates—usually residents or postdoctoral fellows in Ophthalmology—will undergo a careful selection process. Initial reply should include a letter of intent and curriculum vitae. There is no deadline. Address replies to: Jeanette S. Felix, Ph.D., Director of Science, RP Foundation Fighting Blindness, 1401 Mr. Royal Avenue, Baltimore, MD 21217-4245

Affirmative Action/Equal Opportunity Foundation

TRUDEAU INSTITUTE, INC.
POSITIONS AVAILABLE

POST-DOCTORAL POSITION:

A POSTDOCTORAL POSITION in IMMUNOLOGY is available to study the immune response to chronic bacterial pathogens as models of immunoregulation. Candidates with training in cellular and/or molecular immunology who are interested in using their training to analyze *in vivo* models of successful and unsuccessful immune responses should apply. Competitive salary and fringe benefits are offered and institute housing will be made available.

THE TRUDEAU INSTITUTE is a not-for-profit, basic research Institute with modern facilities, up-to-date equipment, in-house animal production, efficient management and an international reputation for excellence. Current staff interests include: immunity to infectious and parasitic diseases, regulation of immune responses, production and function of cytokines and cancer immunology. The Trudeau Institute is located on the shore of Saranac Lake, 8 miles from Lake Placid.

Applications consisting of a curriculum vitae, the names and addresses of three references should be addressed to:

**Dr. Frank M. Collins
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983**



Eleanor Roosevelt Institute

1991 SOMATIC CELL AND MOLECULAR GENETICS LABORATORY WORKSHOP

The Eleanor Roosevelt Institute will again offer a Somatic Cell and Molecular Genetics Workshop, July 15-28, 1991. This NCI sponsored laboratory course provides a combined somatic cell and molecular biology workshop experience. The course has been designed to provide a "hands-on" introduction to the methodology and concepts of current molecular biology procedures for scientists who need to exploit these techniques for their continuing research programs. The content of this workshop also provides the basic techniques needed for researchers interested in initiating genome mapping studies. Included in the curriculum are: somatic cell hybridization and mutant isolation, yeast molecular biology, isolation and analysis of DNA and RNA, preparation and *in vitro* translation of polyadenylated mRNA, DNA-mediated gene transfer, PCR, pulse-field gel electrophoresis, DNA sequencing, Western, Northern, and Southern analyses, one and two-dimensional gel electrophoresis, and the preparation and screening of cDNA and genomic libraries. Principal investigators whose research interests focus on malignancy are particularly invited to apply. A registration fee of \$200 will be charged and a per diem stipend is provided. Applicants should submit a letter describing how the workshop will assist their current research, along with a curriculum vitae which lists publications (no abstracts) for the past five years only, to:

Lynda Fox, J.D., Administrative Coordinator, Somatic Cell and Molecular Genetics Workshop, Eleanor Roosevelt Institute, 1899 Gaylord Street, Denver, CO 80206. Please DO NOT send registration fee at this time.

Applications must be received by April 15, 1991. The Eleanor Roosevelt Institute is an equal opportunity/affirmative action institution and invites and encourages applications from women and minorities. Open to U.S. Citizens and Permanent Residents only.



AGRICULTURAL AND FOOD RESEARCH COUNCIL AFRC POSTDOCTORAL FELLOWSHIPS

The Agricultural and Food Research Council will be appointing up to six postdoctoral fellows in 1991.

The fellowships are to enable a small number of outstanding research workers to devote a significant period to full time research. They are tenable in any of the areas of research funded by AFRC—agriculture, food, biological sciences and related areas in the physical sciences and engineering—and at any appropriate UK higher education institution or research institute prepared to receive the fellow. Applicants are responsible for making their own arrangements with the intended host institution. The fellowships will normally be for 5 years, with the possibility of renewal.

Applicants should be postdoctoral scientists. There are no age limits, but the Council wishes a

proportion of the fellows to be research workers already having significant postdoctoral experience. Applications will be considered from UK nationals, including those returning from a temporary absence abroad and scientists ordinarily resident in the UK. The value of the fellowships is based on the UFC scales for non-clinical academic staff. In addition, the fellow will receive an allowance during the period of the award (£25k in the first year) to help provide technical support, consumable costs etc. Fellows are eligible to apply for AFRC research grants.

Application forms and further details of the fellowships can be obtained from the **AFRC Higher Education Branch, Wiltshire Court, Farnsby Street, Swindon, SN1 5AT (Tel 0793 514242 Ext 379)**. Applications should be submitted by 31 May 1991.

POSITIONS OPEN

ANALYTICAL BIOCHEMIST

Position available immediately for an individual to work at ManTech's Toxic Hazards Research Unit in Dayton, Ohio. Experience in the isolation and identification of xenobiotic compounds and their metabolites in biological tissues is desired. The position requires good communication skills and the ability to interact cooperatively with a multidisciplinary team. Position requires a Ph.D. in chemistry or a master's degree with 2 years of relevant experience with evaluation.

Interested individuals should send curriculum vitae, together with names and addresses of three references, to: **Human Resources/03, Mantech Environmental Technology, Inc., A Subsidiary of ManTech International Corporation, P.O. Box 31009, Dayton, OH 45431.**

ManTech Environmental Technology, Inc., is an Equal Opportunity Employer.

STAFF SCIENTISTS

The Lawrence Berkeley Laboratory's Energy Analysis Program is seeking highly qualified scientists for career positions in three areas:

- **ENERGY ECONOMIST (C/5891):** Concentration on industrialized countries with some focus on Soviet Bloc countries or major regions of the developing world. Requires fluency in at least one European language or Japanese or good reading knowledge of at least two European languages. Prefer Ph.D. in economics, geography, or an interdisciplinary transportation or energy-related discipline.

- **ENERGY AND ENVIRONMENTAL ANALYST (C/6089):** Analysis of economic and environmental impacts or reductions in electricity sales at utility service area and national levels; energy demand and environmental forecasting; analysis of energy conservation supply curves. Prefer Ph.D. in energy-related discipline.

- **ENERGY AND ENVIRONMENTAL ANALYST (B/6277):** Coordination of projects promoting energy efficiency policy innovation in developing countries, with special emphasis on China and Southeast Asia. Prefer Ph.D. in energy-related discipline.

To apply or receive detailed position descriptions, submit résumé to: **Lawrence Berkeley Laboratory, Employment Office, Building 90/1042 (specify Job Numbers above), 1 Cyclotron Road, Berkeley, CA 94720. An Equal Opportunity Employer, M/F/H.**

LAWRENCE BERKELEY LABORATORY

RESEARCH SCIENTIST, BACTERIAL GENETICS AND PHYSIOLOGY. Medical Science Partners in Boston, Massachusetts, is seeking a bacterial geneticist at the postdoctoral level for a private biotechnology project to explore and develop a novel method for selecting bacterial mutants that hyperproduce metabolites (consultant: Professor E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School). Experience in metabolic pathways and their regulation, mutant selection, gene mapping, and construction of plasmid vectors is desirable. General familiarity with basic biochemistry is also essential. Starting salary range: \$34,000 to \$36,000 (depending on qualifications and experience) with benefits and possible equity in the company. There will be one technician to assist the work. Initial appointment is for 2 years. Extension will depend on progress. Send applications with curriculum vitae and naming three references to: **Medical Science Partners, 68 Harvard Street, Brookline, MA 02146.**

RESEARCH ASSOCIATE, GENOME ANALYSIS. A position is available immediately to study mouse tumor suppressor genes. A candidate with a strong background in mammalian genetics, or molecular or tumor biology, and 0 to 3 years of postdoctoral experience will fill this 5-year, NIH-funded position at a starting salary of \$28,000. Applied Genetics Laboratories (AGL), located on the east coast of central Florida, is closely associated with nearby university and high tech facilities, and provides opportunities to develop independent research programs. Submit curriculum vitae, statement of research interests, and names of three references to: **Lisa M. Davis, Ph.D., AGL, Inc., 1335 Gateway Drive, Melbourne, FL 32901.**

SCIENCE welcomes placement of line classified ads by FAX. Please include name and telephone number for our confirmation call when transmitting ad to:

FAX NUMBER: 202-682-0816

EMPLOYMENT AGENCIES

SCIENTISTS

H. T. McCormick Associates, Inc., an internationally recognized executive search firm, has exclusive openings in leading U.S. and European companies for scientists wishing to enter or expand their experience in the industrial sector. **ASSISTANT/ASSOCIATE DIRECTOR OF CLINICAL AND SCIENTIFIC AFFAIRS:** Ph.D. in pharmacology or related discipline to direct pharmacokinetics and drug metabolism contract studies. To high \$70,000's. **SECTION HEAD/PHARMACEUTICAL ANALYSIS:** Ph.D. in pharmaceutical chemistry or related discipline with background in methods development, drug stability evaluation, materials testing, quality assurance, and regulatory affairs. Supervision of three groups. To mid-\$70,000's plus bonus. **GROUP LEADER:** Ph.D. in pharmaceuticals or related discipline to manage the development of stable, manufacturable solid dosage forms from inception through clinical supply manufacture. To \$60,000's. **GROUP LEADER/ANALYTICAL METHODS DEVELOPMENT:** Ph.D. to plan, organize, and manage projects and programs that contribute to the analytical chemistry aspect of research and development process involving new drug substances and dosage forms. To \$50,000's. Company-paid fees. Company-paid relocation when appropriate. Send curriculum vitae in confidence to: **Kelle L. Hornberger, Assistant Vice President of Scientific Recruitment, H. T. McCormick Associates, Inc., P.O. Box 1206, Princeton, NJ 08540.**

COURSES AND TRAINING

9TH SUMMER INSTITUTE IN RISK MANAGEMENT IN ENVIRONMENTAL HEALTH AND PROTECTION (and quantitative risk assessment). 4 to 7 June 1991. Risk management (laws, finance), risk communication, risk assessment (exposure, toxicology). Hazardous and toxic waste applications. Bachelor's degree required. Write: **Summer Institute in Risk Management, Robert F. Wagner Graduate School of Public Service, New York University, 4 Washington Square North, New York, NY 10003, or telephone Professor Zimmerman: 212-998-7432.**

WORKSHOP ON MOLECULAR EVOLUTION, 18 to 30 August 1991. This workshop will consist of a series of lectures, discussions, and computer workshops for the analysis of molecular data. Lectures on the theoretical basis of comparative sequence analysis, phylogenetic tree construction, and current topics in molecular evolution will be presented. Enrollment limited to 60 students. Director: **Mitchell L. Sogin, Center for Molecular Evolution, Marine Biological Laboratory.** Application deadline: 1 June 1991. For further information and application forms, contact: **Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 508-548-3705, ext. 216.**

GRADUATE SCHOLARSHIP IN PLANT NUTRITION. Penn State's Department of Horticulture is accepting applications for the Walter Thomas Memorial Scholarship, which provides tuition and stipend for graduate study in plant nutrition. Potential areas of research include nutrient use efficiency, root biology, and plant adaptation to infertile soils. Applicants are encouraged to send a statement of interest and academic transcripts to: **Dr. Jonathan Lynch, Department of Horticulture, The Pennsylvania State University, 102 Tyson Building, University Park, PA 16802 by 30 April 1991.**

An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

METHODS IN COMPUTATIONAL NEUROSCIENCE. 4 to 31 August 1991. This course is for 20 advanced graduate students, postdoctoral fellows, and faculty in neurobiology, physics, electrical engineering, computer science, mathematics, or psychology with an interest in computational neuroscience. A background in programming (preferably in C and UNIX) is highly desirable. Directors: **James M. Bower, Christof Koch.** Associate Director: **Kenneth D. Miller.** Computation and Neural System Program, California Institute of Technology. Partial financial aid is available to qualified applicants. Application deadline: 15 May 1991. For further information and applications, contact: **Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543. Telephone: 508-548-3705, ext. 216.**

COURSES AND TRAINING

CARDIOVASCULAR PATHOPHYSIOLOGY FOR ENGINEERS AND PHYSICAL SCIENTISTS

A 1-week intensive **COURSE** sponsored by the Massachusetts Institute of Technology (MIT), 17 to 21 June 1991, Cambridge, Massachusetts. Dr. Richard J. Cohen, Program Director. Basic principles of cardiovascular physiology, cardiovascular medicine, diagnostic and therapeutic technologies. Contact: **Director of the MIT Summer Session, 617-253-2101.**

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.**

MOLECULAR AND CELLULAR BIOLOGY INTERDISCIPLINARY Ph.D. PROGRAM TULANE UNIVERSITY

This new intercampus program includes over 40 faculty with interests in areas including cell membrane phenomena; cellular regulatory mechanisms; DNA replication and recombination; gene structure and regulation; HIV regulation and pathogenesis; hormone action and signal transduction; human genetics; microbial genetics and pathogenesis; molecular and developmental neurobiology; molecular parasitology; molecular virology and immunology; oncogenesis, carcinogenesis, and tumor biology; and protein design and engineering. Excellent fellowships (\$10,000 to \$15,000) and full tuition scholarships are available for fall 1991. Contact: **Program Director, Molecular and Cellular Biology Interdisciplinary Program, Tulane University School of Medicine, New Orleans, LA 70112.**

MARKETPLACE

QUALITY DNA
Best Prices
ONLY DNA
1-800-359-5794

SURFACE & INTERFACE STRUCTURE (WET OR DRY):
• COATINGS • POLYMERS • BIOMATERIALS • GLASS
• CERAMICS • METALS • SEMICONDUCTORS • ETC.

MICROSCOPY SERVICES: AFM & STM

Advanced Surface Microscopy, Inc. 6009 Knyghton Rd.
Indianapolis, IN 46220-4955

CALL (317) 251-1364

Circle No. 99 on Readers' Service Card

FREE CATALOG
1-800-942-MATH

MicroMath Scientific Software
Salt Lake City, UT 84121-0550

Circle No. 1 on Readers' Service Card

Custom DNA
Purified and
Delivered in 48 hours.

\$10.00 a base for the first 15 bases, \$7.50 for each additional base. No additional charges.
Research Genetics

1-800-533-4363

Circle No. 4 on Readers' Service Card

We Create An Environment For Growth.



Is restoring the planet vital to you? Are you anxious to find real-life solutions to real-life problems — affordable and effective ways we can preserve our environment and keep America technologically competitive?

If so, you can make a major impact as a member of our team at Battelle, Pacific Northwest Laboratories. Our staff includes 3,500 scientists, engineers and specialists with widely diverse capabilities and internationally recognized expertise. They work individually and in multidisciplinary teams to attack problems affecting waste disposal, environmental restoration, global change, human health and energy resources. And their efforts make Battelle a leader in technical innovation and a steward of the environment.

We currently offer research opportunities in the following areas:

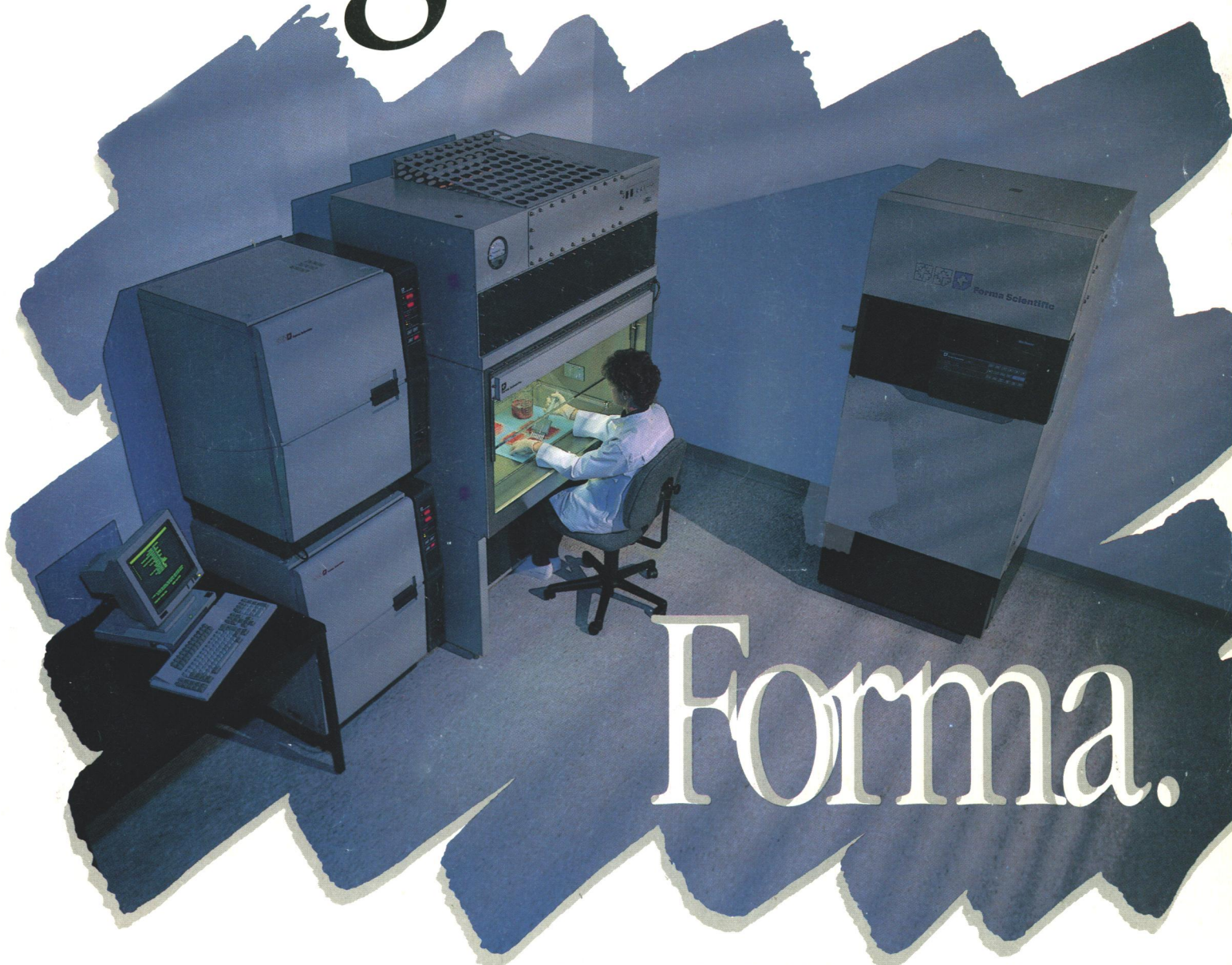
- | | | |
|--------------------------------|----------------------------------|-------------------------------------|
| • Regulatory Analysis | • Geochemistry | • Risk and Safety Assessment |
| • Global Climate Change | • Microbiology | • Organic Chemistry |
| • Site Characterization | • Ecophysiology | • Aquatic Toxicology |
| • Health Physics | • Environmental Economics | • Technological Assessment |
| • Oceanography | • Energy Planning | • Hydrology |

Working at our Laboratories in Richland, Washington, you can enjoy big-city amenities and a small-town lifestyle. The community offers affordable housing, quality education, pleasant climate and year-round recreational opportunities.

Help us in deploying strategies that will protect the earth's resources. Fax/send your resume to: **Battelle, Pacific Northwest Laboratories, Staffing Center, Dept. RZ41, PO Box 1406, Richland, Washington 99352. FAX # (509) 376-9099.** We are an Equal Opportunity Employer. U.S. Citizenship Required.

 **Battelle**
...Putting Technology To Work

Single Source...



For tissue culture, virology and bacteriology applications, you need a stable environment from a proven incubator . . . when working with infectious materials or precious cell lines, you need a reliable biological safety cabinet . . . for short and long term storage at ultra-cold temperatures, you need a dependable ultra-low temperature freezer.

Forma Scientific offers a full line of water jacketed, forced-draft, hepa filtered and large capacity incubators with CO₂, O₂, and RH control capabilities. Chest and upright ultra-low temperature freezers, with temperatures down to -135°C; plus, biological safety cabinets and laminar airflow equipment. In addition, Forma features laboratory refrigerators and freezers, baths and circulators, glassware

For immediate contact, circle reader service number 59
For more information, circle reader service number 62

washers, blood bank equipment, anaerobic systems and custom-designed equipment.

Prompt, knowledgeable assistance in equipment selection, quality products, and service are provided by a single source, Forma Scientific.

Make Forma Scientific your first choice in laboratory equipment.



Forma Scientific, Inc.

Box 649, Marietta, Ohio 45750 1-614-373-4763

Telefax: 1-614-373-6770 Telex: 29-8205

U. S. and Canada 1-800-848-3080